

ARCHAEOLOGIA :  
OR  
MISCELLANEOUS TRACTS  
RELATING TO  
ANTIQUITY.





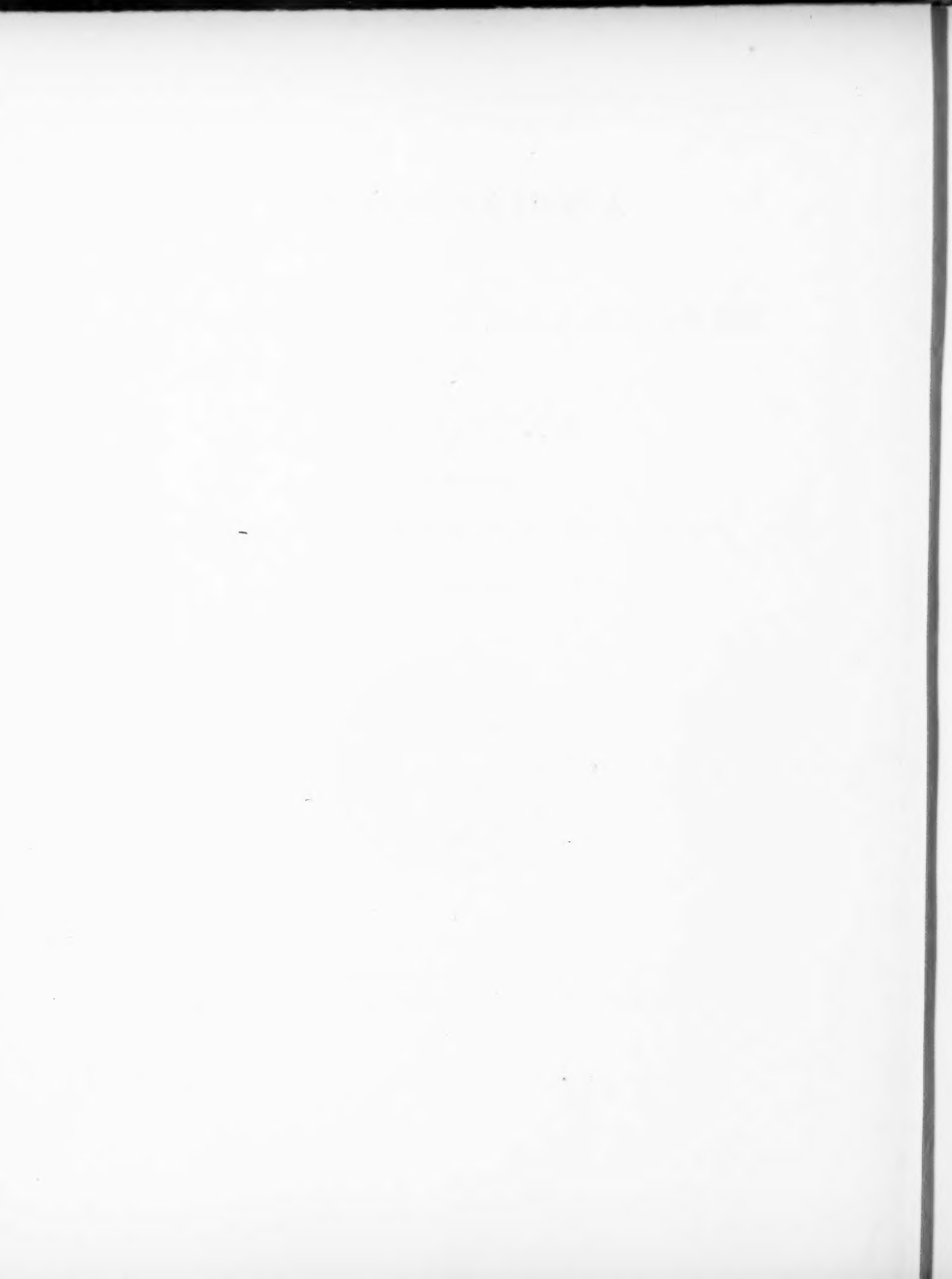
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PUBLISHED BY THE  
SOCIETY OF ANTIQUARIES OF LONDON,  
VOLUME LIV.



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I.—*The Rise and Growth of the Chapter of Wells from 1242 to 1333. By the  
Rev. C. M. CHURCH, M.A., F.S.A., Sub-Dean and Canon Residentiary of Wells.*

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Read January 21, 1892.

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THE history of the church of Wells under its bishops from 1174 to 1247, from manuscript documents in possession of the Dean and Chapter, has formed the subject of papers in former volumes of *Archaeologia*.<sup>a</sup> I propose to draw from the same sources some notes on the history of the "chapter," and of the rise of the buildings of the church, in the latter part of the thirteenth and early years of the fourteenth century. The history of the church of Wells has been marked hitherto by the names of individual bishops. In this next period the growth of the chapter as the governing body in the church is the distinguishing feature.

I. 1242—1286.

From the time of Edward, son of Alfred, to Edward the Confessor the canons of Wells were secular priests living at the church under the rule of the bishop, and dependent upon him for their support. The monks of Glastonbury must have looked down from the mount of the Archangel across the moor upon the distant church of Wells, in the shadow of the hills, as a struggling

<sup>a</sup> "Reginald, bishop of Bath," *Archaeologia*, i. 295-361; "Savaric, bishop of Bath and Glastonbury," li. 73-106; "Jocelin, bishop of Bath," li. 281-346; and "Roger, bishop of Bath and Wells," lii. 89-112.

mission station of secular priests under their bishop, who was often taken from their own house." Under Gisa, the foreign bishop, contemporary with the Norman Conquest, the canons lived under that semi-monastic rule of Chrodegang of Metz, which bishops from Lorraine had introduced here and at Exeter. Under Gisa the lands of the bishop were greatly extended by donations from both Edward and William. The canons of St. Andrew appear in the Domesday survey as tenants of the bishop, for fourteen hides of land in Wells and eight and a half in Litton.<sup>b</sup> So much were the canons of St. Andrew only the tenants at will of the bishop, that John of Tours, who succeeded Gisa, transferred the see to Bath, turned the canons out of the buildings which Gisa had built for them at Wells, appropriated the lands of the canons and farmed them out to Hildebert the provost, his steward, who distributed certain stipends to the canons, and devised the lands as private possessions to his son John the arch-deacon, and he to his brother Reginald the precentor.<sup>c</sup>

But the Norman bishops had brought with them into England a form of government for the cathedral churches which they had followed in their own churches of Rouen and Bayeux, whereby the canons obtained a separate and independent position, and the home government of the church became vested in them as a body, the chapter.

About the same time at York and Lincoln in 1090, and at Salisbury in 1091, the same type of cathedral constitution was instituted for the government of the cathedral church, which became the pattern for all secular chapters subsequently erected. By the Acts made in councils of the Norman bishops, and ratified by the king, the cathedral churches were put under the government of officers with definite offices and duties, and separate possessions attached to the offices, the same officers in the main which existed in Norman Bayeux, viz. : dean, precentor, chancellor, and treasurer. With them was a body of canons with the dean as their head, who was elected by themselves, while the other officers were appointed by the bishop.<sup>d</sup>

<sup>a</sup> During the tenth century three bishops succeeded to the See of Wells who had been abbots of Glastonbury.

<sup>b</sup> Eyton's *Domesday Studies*, i. 142; ii. 23.

<sup>c</sup> *Historiola*, 22, 23.

<sup>d</sup> *Lincoln Cathedral Statutes*, ed. Bradshaw and Wordsworth, 31-36. "It is at Bayeux that we find the precise pattern followed by St. Osmund in his ordering of the offices of decanus, cantor, cancellarius, thesaurarius, four archdeacons, subdecanus, and succentor which he established at Salisbury."

The endowments of the church were now divided between the bishop and the canons, and all the canons resident shared according to residence in their common fund, the "communa;" a separate portion also was reserved to each as his "prebenda" or maintenance, irrespective of residence at the cathedral church, the possession of which gave him a voice in the business of the chapter.

"When we look," says Henry Bradshaw, "to the constitution of the cathedral bodies in different parts of western Europe we find what is practically the same development taking place, though the distribution of offices is varied to a great extent. This particular form of church government was being planted by the bishops in our English cathedrals on the eve of the opening of the twelfth century."

In accordance with this policy bishop Robert, the successor next but one to John of Tours, introduced the capitular constitution at Wells in 1136.

The charter of Robert "De Ordinatione Prebendarum," in the Wells chapter register, virtually incorporated the chapter. Bishop Robert says "he found the church intolerably afflicted by exactions. He remodelled it according to the fashion of other well ordered churches in council with the archbishops, bishops, and other religious persons of England, in order to save the possessions of the church, and to secure them from lay exactions and intrusions." He made over certain possessions of the bishop to be the endowment of canons and officers in the cathedral church. He instituted a dean, sub-dean, and twenty-two prebendaries holding therein property separate and independent of the bishop.

This charter was made in the presence of Henry of Blois, bishop of Winchester and abbot of Glastonbury, and was afterwards confirmed by archbishop William of Canterbury, bishop Thurstan of York, Roger of Sarum, William of Exeter, Simon of Worcester, Robert of Hereford, Alexander of Lincoln, Nigel of Ely, Seffrid of Chichester.\*

Such was the origin of the capitular constitution at Wells. It was the act of the bishop in council with a synod, and in accordance with the general policy of the time. But it was especially designed as a measure of defence against such spoliation as the canons had lately suffered, and to guard their portion of the church from the hands of the Crown when on occasion of vacancies in the see the Crown took possession of the temporalities and kept the see vacant from interested motives.

\* R. i. f. 31, printed in Dugdale's *Monasticon*, Oxford edition, 1819, . ii. 293. *Historiola*, 24 (Camden Society), says he acted also, "consilio et auxilio Regis Stephani et venerabilis Episcopi Henrici."

One result of this separation of the property of the bishop and the canons was the weakening of the old connection between the bishop and his cathedral church.

The bishop and chapter are thus early beginning to part company.

"Each cathedral church now became a distinct corporation with a head in the person of its dean distinct from the bishop. Hitherto the bishop had been the head of his canons, much as an abbot was the head of his monks. Now the chapter became a separate body with interests and possessions of its own distinct from those of the bishop who became the visitor of an independent corporation."<sup>a</sup>

On the other hand the division of church property into prebends, and the distribution of the members of the cathedral church through the diocese as holders of prebendal estates with local responsibilities and duties, brought the Church into touch with the diocese, increased its influence, and drew support to the cathedral church. Gradually the appropriation of churches to the chapter, the endowments of prebends by landlords and laymen, had increased the number of canons from twenty-two in bishop Robert's time to thirty-five in that of bishop Reginald. Savaric gave stalls in choir and chapter to the abbots of Muchelney and Athelney, and among the canons for the time were the abbots of Glastonbury, as prebendaries of Pilton, and the abbot of Norman Bec, who held the prebend of Cleeve. Under Jocelin the number of canons or prebendaries was further increased to forty-eight. One more prebend, that of Dinder, the last instituted, in 1264, made up the staff to forty-nine and a dean.

"The need of an organisation for the management of the mother church of the diocese, whether for the importance of the church or from the necessarily frequent absence of the bishop, had led to the creation of a systematic form of home government, and in order to foster a due sense of responsibility it became a matter of good policy for the bishop to confer great powers and privileges upon the body to which the home government was entrusted."<sup>b</sup>

By degrees and especially by reason of the increased value of the endowments under bishop Jocelin, the chapter offices and stalls had become of sufficient value to tempt the grasping hands of pope, and king, and courtiers.

At the time of Jocelin's death, 1242, the dean lately appointed was a nominee of the pope, John Saracenus, son of a Roman citizen in the pope's body guard,

<sup>a</sup> Freeman, *Cathedral Church of Wells*, p. 63.

<sup>b</sup> H. Bradshaw, in *Lincoln Cathedral Statutes*.

who had been the pope's agent in negotiations and embassies.<sup>a</sup> He was the chief representative at Wells of the three hundred Italians for whom the pope's legate had desired Henry to find English benefices.

Some of the canons of the day were high in the king's court, Walter de Gray, archbishop of York and chancellor, one of the regency during the king's absence; Sylvester de Everdon, keeper of the exchequer; John Mansel, king's secretary and privy councillor until his dismissal in 1261; Philip de Gildeford, Robert de Marisco, men about the court, were at the same time non-resident canons.<sup>b</sup>

Of the resident body, the archdeacon of Wells, William of Bytton, was the leader of the chapter, founder of a strong family interest in the chapter, members of which occupied chief places in the church of Wells for at least three generations. The family had come from that same part in the north-west promontory of Normandy called the Côtentin, in which the Bohuns had their seat. The manor of Bytton, in the Avon valley, between Bath and Bristol, had been given by Henry II. to Adam of Ammeville, near Barfleur, about 1158.<sup>c</sup> It descended from father to son for four generations, and some of the younger members of the family from each generation found home and employment in offices of the church of Wells.

Such was the strength of the chapter when the conflict with the Bath chapter called out their energies and gave occasion for their assertion of independence of both bishop and pope. Several instances occur. They had appealed in vain to the pope against the unconstitutional act of Bath. Smarting under the adverse decision of the pope they showed their resentment by rejection of the interference of the papal delegates in their own chapter affairs. The delegates of the papal commissioners had supported a rival claimant to the archdeaconry of Wells against William of Bytton, and summoned the chapter to appear before them in chapter, to hear their sentence on a certain day, September 15th, 1244. The chapter refused to receive the letter, made formal appeal against the decision of the delegates, and solemnly excommunicated, "*accensis candelis et campanis pulsatis*," the rival claimant and all of their own body, or of the abbey of Glastonbury who yielded obedience to the delegates. (R. 1, f. 97.)

Again, in 1247 they showed their jealousy of Roman interference. The chapter refused to allow dean John Sarracenus, the Roman nominee, the usual permission to take beneficial leases under the chapter, or to let out the deanery

<sup>a</sup> Royal letters, Henry III., in 1217, 1236, 1252.

<sup>b</sup> *Archæologia*, iii. 92.

<sup>c</sup> Pipe Rolls, 1158.

lands, notwithstanding a papal licence, on the express ground that his family had too great influence at the Roman court, "et hoc solummodo propter potentiam suam et suorum quam habent in curia Romana."<sup>a</sup>

Nor were they long in asserting their rival claims against the bishop whom they had received at the papal mandate. They thought him slow in carrying out the order of the Roman court that "Wells" should be added to the style of the episcopate. By immediate appeal to pope Innocent they obtained a peremptory order to the bishop, by which the title of "Bath and Wells" was at once assumed in seal and signature in 1245.

They asserted their rights to the sequestrations of all vacant benefices in the diocese on the strength of bishop Reginald's grant of them to the chapter toward the fabric fund,<sup>b</sup> and the bishop was forced to yield. The chapter, satisfied with the acknowledgment of their claims, granted a life interest in them to the bishop in relief of the debts of the see, "debitorum suorum et episcopatus attendentes gravamina, in subsidium et juvamen exonerationis ipsius et episcopatus concesserunt."<sup>c</sup>

At another time they disputed with success the bishop's right to visit any of the prebends of the chapter<sup>d</sup> as exempt from episcopal or archidiaconal jurisdiction.

It is a proof of the conciliatory spirit of bishop Roger that the two last years of his episcopate were marked by many acts of favour towards the chapter. He granted to them the custody and proceeds of the deanery when vacant. He supported them in their resistance to the attempt of Glastonbury to recover the ceded manor of Winscombe; and he drew up the Act of Pacification, by which, as arbitrator, he closed the strife between the two chapters, and established their complete equality in the election of the bishop.<sup>e</sup> In his last year he gave his episcopal confirmation of the possessions of the chapter, which was confirmed also by the prior and convent of Bath.<sup>f</sup>

Such was the successful end of the first trial of strength of the chapter in assertion of their corporate rights, independent of the bishop, during bishop Roger's time, 1244—1247.<sup>g</sup>

Bishop Roger died on December 21, 1247. He was the last of the bishops who were buried at Bath. The complete acquiescence of the chapter of Bath in

<sup>a</sup> R. i. f. 97, de potentia Sarraceni decani.

<sup>c</sup> R. i. f. 64; ii. f. 15; iii. f. 11.

<sup>e</sup> *Orig. Doc.* 45—47.

<sup>f</sup> R. iii. f. 4, 5.

<sup>b</sup> *Archæologia*, i. 326, note.

<sup>d</sup> R. i. f. 96.

<sup>g</sup> *Archæologia*, lii.



the choice of his successor William of Bytton, archdeacon of Wells, shows the strength of the Wells chapter. He was elected without opposition by the proctors of the two chapters on February 24, 1248, and consecrated June 14 at Rome, with the double title of the see "Bishop of Bath and Wells."

Bishop William's episcopate lasted from 1247 to 1264. He was the first of a type of bishops of the see at this period, statesmen and worldly ecclesiastics, whose ability recommended them to the service of the crown; and their employment in state affairs involved their frequent absence from the diocese. The government of the church in consequence remained in the hands of the dean and chapter, who thus grew in power and independence. Such bishops were bishop William's successor, Walter Giffard chancellor of the kingdom, and soon promoted to the archbishopric of York; Robert Burnell, 1275—1292, chancellor and chief minister of Edward I.; William de Marchia, 1293—1302, treasurer to the king; John of Drogheda, keeper of the wardrobe, 1309—1329, to Edward II.

Two exceptions there were, bishops who had been through the ranks of the chapter: William of Bytton the second, 1267—1274, nephew and successor to his uncle bishop William, in the archdeaconry, then in the bishopric, a saintly man, chosen by Kilwardy the archbishop, at his consecration, "*quia famæ sanctitatis cæteros antecedit.*" His goodness was attested by reputed miracles at his tomb, "*ubi multis fulgebat miraculis.*" The other was Walter de Haselshaw, canon, elected dean in 1298, and bishop 1302—1308. His rule was signalled by a code of statutes in 1298, enforcing much stricter discipline, and greater care and reverence in worship.

The episcopate of bishop William of Bytton the first was chiefly remarkable for his long absences from England, and for his controversies with his chapter at home. He was at Rome at the time of his consecration in June, 1248, and probably through the year. In 1253 he and John Mansel, the king's chief counsellor, were sent on an embassy to king Ferdinand of Castile, to negotiate the double marriage of prince Edward to Eleanor of Castile and of the eldest son of Ferdinand to the English princess Beatrice. He was with the king in Gascony in 1254. Again, he and the bishop of Rochester were the king's secret agents at Rome in 1256, 1257, in transacting the king's money negotiations with the pope, to whom Henry, to the great discontent of the nation, had incurred a debt of 140,000 marcs as the price of his acceptance of the fief of Sicily from the pope for his son Edmund.

While at Rome on the king's business he obtained from the pope the confirmation of the possessions and liberties of his see, and also a letter to the king, in

which he bears testimony to the bishop's zeal in the king's cause at Rome, "*operosis suis negotiis nuperrime apud sedem apostolicam confectis*," and urges the king to restore to the bishop the right of the "*patronatus*" over the abbey of Glastonbury, which had been granted by King John. But the king, probably under prince Edward's influence, had assumed the chief lordship over the abbey; and this appeal from the pope had little weight at this time of national discontent. The king was forced to dismiss his counsellor John Mansel in 1261, and with the fall of his friend the bishop lost all further chance of the king's favour.

While the bishop was occupied with state affairs abroad the chapter was struggling with difficulties in the home government of the church.

The registers give evidence of much activity on the part of the chapter at the time :

- (a) In assertion of their independent claims ;
- (b) In meeting the debts of the church ;
- (c) In enforcing discipline ; and
- (d) In ordering and correcting ritual.

They had to hold their own against the bishop's nepotism early in his episcopate, and other occasions of controversy arose :

(a) In 1249 the bishop, in contradiction to his own previous action as a member of the chapter, laid claim to the fruits of vacant benefices. The chapter resisted, on the same grounds with which they had met his predecessor, and no doubt with the same calm confidence in their rights, "*cum animi tranquillitate et mansuetudine contra respondebant*." The bishop yielded and then as before the chapter, in consideration of the bishop's kindly feeling and the burden of his debts, "*episcopi erga nos devotionem, et debitorum suorum et episcopatus gravamen attendentes*," made a grant to him of the fund for his lifetime, without prejudice to their successors.<sup>a</sup>

Again, in 1250, the bishop collated to the church of Congresbury, though in the patronage of the chapter, his nephew William, archdeacon of Wells. The canons protested, and on the bishop's refusal to revoke his appointment, they cited him to the archbishop's "court of arches," "*in ecclesia S. Mariæ in Arcubus*." Next year the bishop conceded the claim of the chapter, and revoked his appointment. Then the chapter confirmed his nephew whom he had nominated.<sup>b</sup> These amicable suits were the preludes to more serious controversies in the next century.

<sup>a</sup> R. i. f. 8 ; ii. f. 15 ; iii. f. 11.

<sup>b</sup> R. i. f. 100, 101 ; R. iii. 207.

(b) In relief of the intolerable debts of the church, one-fifth of all prebendal estates had been mortgaged for seven years in 1245. Great difficulty was found in enforcing the assessment, and throughout these years suits were going on against defaulters. Some of the greater and lesser canons had made the payment, but very many, "*quam plures*," had not; and distraint, sequestration of prebends, and excommunications were threatened and enforced. The prebendary of St. Decumans owed six pounds for six years to the fabric, and the dean and chapter sold his goods to satisfy their claim.<sup>a</sup>

The abbot of Bec in Normandy was a defaulter; he promised by his proxy to pay for his prebend of Cleeve by a certain day, but the payment was not made, and he was excommunicated.<sup>b</sup>

The abbot of Athelney, also canon of Wells, is cited before the chapter on the charge of having broken his canonical oath by carrying a case against the chapter, on some alleged trespass, before the civil judges; he sent one of his monks as proxy with letters; the chapter refuse to receive his proxy, and summon him in person; he appears in person as abbot, and the case is heard, adjourned, and arranged.<sup>c</sup>

(c) They are enforcing discipline and inflicting punishment upon criminous clerks, vicars and canons, by warning, by deprivation. In the case of some vicars accused of certain great offences, "*criminibus enormibus*," they were required to take the pledge of going to the Holy Land, and be deprived of their commons for three years, and after that time they might be admitted on conditions to be then fixed.<sup>d</sup>

Canon Walter de Purley was suspended for a year for incontinence, and his prebend of eight marcs value was confiscated to the fabric fund. Robert Giffard, another canon, was expelled from church and city for six months and bound to pay sixty shillings to the master of the fabric, and warned of deprivation of his canonry on another offence. As might be expected from the indefinite position held by the vicars at this time, they supplied the more flagrant cases requiring sharp correction and formal dismissal.

It must have added not a little to the difficulties of the chapter that the dean at the first part of this time, John Sarracenus the Roman nominee, was an alien element in the chapter. While on one hand the canons were called upon to proceed against defaulters in their own body for nonpayment of dues, and were

<sup>a</sup> R. i. f. 69, 70.

<sup>b</sup> R. i. f. 65 and 98.

<sup>c</sup> R. i. f. 33, 34.

<sup>d</sup> R. i. f. 70, 71. R. i. f. 65.

enforcing discipline continually on disorderly vicars and upon canons of ill-life, they were also obliged to be upon their guard against the intrigues of Roman connections of the dean as well as against the nepotism of the bishop.<sup>a</sup>

But in 1253 the dean John Sarracenus died, and Giles of Bridport, archdeacon of Berkshire, was elected by the canons. He held the deanery for three years until his appointment to the bishoprick of Salisbury in 1256. He has left little record in our registers, except his tenacity in holding his offices in plurality. When elected dean he protested that he did not intend to withdraw from the archdeaconry or any of his other benefices, and appealed to the apostolic see.

When elected to Salisbury he again claimed to hold also the deanery of Wells, and obtained papal letters suspending the election to the deanery as not being vacant. The chapter protested and appointed their proctor and petitioned the pope for right of free election, and then proceeded to the election of the dean.<sup>b</sup>

There must have been some strong men in the chapter at this time thus to hold their own against bishop and Roman agents. Such a man appears in Edward de la Cnoll, prebendary of Henstridge, who was now elected by the chapter and confirmed by the bishop as dean, September 1256, in spite of the opposition of the papal officers, and though Giles of Bridport was not consecrated bishop until March 11, 1257.

Dean Edward was, like his master bishop Jocelin, by whom he was brought into the chapter, "a son of the soil," from the manor of Knoll in Wookey, where father and grandfather had held land as tenants of the bishops Jocelin and Robert. He lived through three episcopates to September 12th, 1284, and by his vigorous administration of nearly thirty years he made the chapter the ruling body and centre of discipline and government. His policy was carried on and developed under his successors in the deanery, Thomas Bytton and Walter Haselshaw. The new dean was the author of two codes of statutes in 1259, and in 1273, in which the constitution of Robert and Jocelin was modified and adapted to the later times in matters of residence and chapter business, and the Ordinal was revised and corrected.

The statutes of dean Edward in 1259 were promulgated with the will and assent of bishop William, but under the presidency of the dean.<sup>c</sup>

<sup>a</sup> R. v. f. 97.

<sup>b</sup> R. i. f. 101, 102.

<sup>c</sup> *Presente et in capitulo presidente viro provido et sagace domino Edwardo decano Wellense habita deliberatione qua decuit cum capitulo . . . voluntate et assensu venerabilis patris domini Will. Bathon. et Wellen. Episcopi.*

They begin with a preamble of apology for the necessity of change and innovation on the statutes of bishop Jocelin, then they order a stricter rule of residence than had hitherto prevailed at Wells. Two views of canonical residence had been current. By the "*Nova Constitutio*" of Salisbury, 1214, it was required that canons should reside continuously for a fourth part of the year, so that a fourth part of the body should always be in residence together with the four chief dignitaries, "*quatuor personæ*," except when employed in the service of king, archbishop, or bishop. Failure of residence involved the forfeit of a fifth of the prebend.

Bishop Jocelin in 1240<sup>a</sup> had ordained that the dignitaries who held office should reside continuously for three parts of the year, but prebendaries not more than half the year, and at any time within the year, "*sive continue sive interpolatim*," to entitle them to share in the common fund; for the rest of the year they might reside on the prebend, either serving the cure of souls in person or appointing the vicar at a fixed payment regulated by the bishop, and no single canon was bound to reside unless he wished. There was only one audit in the year, to be held on the Feast of St. Calixtus, October 14.

But bishop Grossteste at Lincoln in 1239 had tried to enforce the stricter rule of continuous residence for all canons, and had forbidden the tenure of cure of souls by canons.<sup>b</sup>

This stricter rule of residence was now laid upon the canons. Complaints had arisen of inexact computation and unequal distribution. The year was now divided into four terms of thirteen weeks; from Michaelmas to the vigil of St. Sylvester, December 31; from St. Sylvester to the last day of March; from April 1 to June 30; from July 1 to Michaelmas. Four audits were to be held in the year, one in each term, and residence was strictly required within each term, of six weeks and four days for simple canons, of eight weeks for the "*quinque personæ*," dean, precentor, archdeacon of Wells, chancellor, and treasurer. Incomplete residence in one term might not be made up in another. A more equal partition of the common fund was ensured; fifty marks reserved from the revenues of North Curry were to be always in the hands of the communar for division among the residentiaries.<sup>c</sup>

These statutes were done in chapter the 5th of March, 1259, present the dean Edward; Gilbert de Byham, precentor; John Forte, chancellor; Hugh de

<sup>a</sup> R. i. f. 51; ii. f. 17.

<sup>b</sup> Grossteste Letters, pp. 74-127, R. S.

<sup>c</sup> R. i. f. 105 iii. f. 17.

Romenal, treasurer; John de Axbridge, sub-dean; Richard, succentor; and twelve canons, whose names are given.

The last year of bishop William's episcopate was brightened by the relief of the church from debt. It had been clouded by debt and disasters, and he had been in controversy with his chapter. Now, in a charter dated from Banwell, June 15th, 1263, in the last year of his life, he passes in review the past sufferings of the church, the generosity of the chapter in granting him the sequestrations of vacant benefices for the relief of his debts, and then, thanking God that the church is almost relieved from that burden, and, unwilling that the chapter any longer should suffer through him, he restores to the chapter those sequestrations which his predecessors had granted to him, and appoints that they shall be once more devoted to the fabric fund, "*attendentes quod dicta ecclesia nostra, benedictus Deus, ab hujus onere pene relevatur, predictas sequestras pura et spontanea voluntate restituimus, volentes fructus inde nobis provenientes deinceps in fabricam ecclesiæ de nostro assensu convertantur.*"<sup>a</sup>

With the year 1263, and the restoration of the fabric fund, begins a course of preparation for new buildings. The recovery of the church from the burden of debt was due to the self-sacrificing spirit of the chapter, men of local ties and interests bound up with the city and church in which they lived, men like Edward de la Cnoll and the Bytton family; Hugh de Romenal, treasurer; John of Axbridge sub-dean, and others who had pledged themselves to self-taxation of their incomes, and gave liberally of their substance to the church. The Bytton family had become enriched by the church, but members of it also spent their money liberally upon the church. We can trace John of Bytton, the rich provost of Combe, at one time undertaking a loan for the church on his own responsibility, at another making himself answerable for the payment of a pension of 100 mares to the cardinal Octavian, one of the patrons of the chapter at Rome, giving of his money to assist the penury of religious houses in the diocese, building and endowing the altar of St. Nicholas in the "Cloister Lady Chapel" as the chantry of the family. It was a time when gifts and offerings were flowing into the church for the endowments of altars for memorial services of the departed, some given by the clergy of the church for themselves, or by strangers for their friends, others in return for benefits received during lifetime. It was a time when a change was taking place in the nature of the endowments made by the religious world to the church. Through the last century and

<sup>a</sup> R. ii. f. 15; iii. f. 11.



a half benefactions to the church had taken the form of endowment by lands and money for the fabric fund or for prebends and offices in the church. Now a greater prominence was being given in the teaching of the Church, to the doctrines of purgatory and indulgences, and to the duty of the living towards the dead, to remember them before God in prayers and intercessions. The foundation of chantries and obits in the church was becoming the fashionable form of religious endowment, by which provision was made by gifts and legacies for the support of priests and chaplains who should offer up, daily and on anniversaries, prayers and masses for the departed, and during the latter half of the century rich offerings and endowments were being made by the Bytton family and others.<sup>a</sup>

<sup>a</sup> In 1251 Godfrey de Bridport endowed masses for the Lady Agatha de Meisey at the altar of *Our Lady* in the chapel on the south side of the church. (Orig. Doc. 83. R. i. f. 84; Cf in 1268; R. iii. f. 291-2.)

In 1251 the altar of *St. Saviour*, lately constructed by Henry de Tesson, precentor, was endowed with forty shillings for masses for his friend Walter St. Quintin, archdeacon of Taunton. (R. iii. f. 186.)

In 1249-1263 the altar of *St. Mary Magdalen* was endowed with thirty shillings per annum rent charge on Stavordale Priory by the subdean John of Axbridge. (R. i. f. 116. Orig. Doc. 54. R. iii. f. 127.)

In 1268 a chantry was endowed by Hugh de Romenal subdean at the altar of *St. John Baptist*. (R. i. f. 26, 92. Orig. Doc. 96.) And here the hospital of *St. John Baptist* in Wells founded an obit for bishop William of Bytton and Richard of Bytton precentor. (R. ii. f. 6.)

In 1269 the altar of *St. Edmund of Canterbury, Confessor*, in the south side of the nave was largely endowed by canon Richard Bamfield as his place of burial. (R. iii. f. 288.)

In 1276 the altar of *St. Nicholas* in the chapel of the Blessed Virgin near the cloister, was constructed by the legacies of the wealthy provost John of Bytton, and endowed for mortuary services for himself and his brother bishop William (R. i. f. 22, R. iii. f. 124.), and still further increased by endowments by bishop William the second. (R. i. f. 90, R. iii. f. 188.) There seems reason for thinking that this was the burial place of bishop William the first. The endowments of obits made at the altar of *St. Nicholas*, and in the "Cloister Lady Chapel" by the Bytton family mark this chapel as the mortuary chapel of the family, the chapel where the body of the bishop first rested. But bishop Drokenford's Register, f. 123-8, contains the collations to the annale endowed "in memory of bishop William the first at the altar of the Lady Chapel behind the high altar," in 1319, 1328, 1339, and later notices, the Canon of Wells and Godwin, speak of his tomb as in the middle of the new Lady Chapel.

Perhaps we may reconcile the earlier and later statements by supposing that when the second and more stately Lady Chapel was raised, the body of the first bishop of the Bytton family, the first bishop buried at Wells since the strife with Bath, was translated to the more honourable place within the church by his great nephew Thomas of Bytton, dean 1284-1292 and afterwards bishop of Exeter.

Thomas of Bytton, second son of Sir Adam de Bytton, was successively precentor, archdeacon, dean of Wells, and bishop of Exeter. He was a builder of the choir and vaulted roof at Exeter, died September 21, 1307, and was buried before the high altar. His monument at Exeter was an

All such offerings contributed to the richness and adornment of the church, "the offerings for the dead became a source of trade to the living," they supported the ministrant body, they brought worshippers and almsgivers to the church, they fostered the sense of communion between the departed and the generations of the day, and the love and enthusiasm for their church as the common home of the departed and present members of one body was kindled and perpetuated.

In the election of the bishop in succession to bishop William Bytton great care is shown in observing the formalities securing the rights of the two electing chapters. Prior and convent, dean and chapter send two proctors each to obtain the king's licence. They send two proctors each to Ferenton, midway between the two towns, to fix the day of election. Four proctors from each make the election of one "*de ipsis, de gremio seu de collegio ecclesiarum nostrarum.*"

Finally, on Thursday after the feast of St. Dunstan, Walter Giffard, sub-deacon, papal chaplain, and canon of Wells, was chosen bishop, and May 22, 1264, the dean makes the announcement.

The chapter who had so lately received a bishop and a dean at the hands of the pope, now in exercise of free election cannot escape the influence of the king, and the names of many subsequent bishops and their positions about the court shew that the king's recommendation went with the licence to elect, though it was not always taken. But in the election of the deans they were more free,

incised stone like that of his uncle bishop William the second at Wells. The chapel of St. Catherine in the church of Bytton was built by him, containing an endowed chantry in commemoration of his father and mother.

Godwin says of the tomb of bishop William the second: "*Monumentum ejus situm est inter duas columnas ab australi parte chori ubi marmor videmus pontificis imaginem habens insculptam.*"

The seal of bishop William the second is thus described in Drokenesford's Register<sup>a</sup>: "*Describitur sigillum magnum authenticum Will. Bitton in cujus medio erat imago cujusdam pontificis baculum pastorem tenentis et manum dextram sublevantis in modum benedicientis: a lateribus vero imagines duæ ecclesiæ erant sculptæ cum campanilibus et crucibus suppositis; in circumferentia vero ejusdem literæ continebantur infra scriptæ, Will. dei gratia Bathon. et Wellen. Epûs. In suprema vero parte sigilli minoris indorsati, erant duæ imagines sculptæ, viz. beatorum apostolorum Petri et Andreæ cruces in manibus tenentium, sub quibus imaginibus erat imago cujusdam episcopi genua flectentis et manus sublevantis ad modum orantis. In superscriptione dicti sigilli minoris hæc literæ legebantur: "Crux germanorum, Willelmo sit via morum."*

The brother's Cross! oh! may it be, William the rule of life to thee!

One of the "campanilia" in the seal has a spire.

<sup>a</sup> Drok. Reg. f. 152a. Ordinatio Vicariæ de Wyveliscumbe. Banwell 1262, confirmata, 1317.



and the choice they made of such men as succeeded one another through the next hundred years out of the body of canons, "de gremio nostro," was excellent. The deans, Edward de la Cnoll, Thomas Bytton, Walter Haselshaw, John Godley, stand in honourable rivalry with the bishops of the day, as the governors and builders of the church.<sup>a</sup>

## II. 1286—1305.

Between 1242 and 1286 no mention is made in the registers of any work upon the fabric of the church. One important event in the fabric history is recorded by Matthew Paris under the year 1248. He says that he heard from the bishop, William of Bytton, consecrated at Rome in June of that year, that an earthquake, felt especially in his diocese four days before Christmas, had thrown down a stone spire (*tholus*) of great weight which the builders were raising on the summit of the church: "*tholus lapideus magnæ quantitatis et ponderis qui in summitate ecclesiæ in decorem ponebatur,*" and that much damage was caused by the fall. He adds that the effects of the shock were felt not so much on the bases as on the capitals of the columns.<sup>b</sup>

Mr. Freeman understands by the word "*tholus*" the vaulting of the church, and attributes to this earthquake the fall of the vault and the consequent breaks

<sup>a</sup> The process for the appointment of a dean is fully set forth in the Wells Registers, and illustrated by examples in the cases of several succeeding deans until 1547. R. i. f. 57 contains the charter of bishop Jocelin, concerning the appointment, 1216. Cf. R. i. 113 in dors., duplicate copy.

It sets forth what had been the process in the appointment of two deans during Jocelin's episcopate, and such had been the process handed down from ancient days:

Ut cum decanus ecclesie illius, domino eum vocante, decesserit, capitulum nobis et successoribus nostris celeriter nuntiare non omiserit, precarique licentiam alium decanum eligendi.

Quæ quidem electio si concessa sit convocatis fratribus ad diem dictum invocata Spiritus sancti gratia, talem sibi in decanum eligant personam, qualem ecclesiæ suæ magis viderit fore necessariam et quæ sibi quoad vitam et aliis possit proficere ad exemplum.

Electam personam nobis præsentantes, confirmationem electionis postulantes ut quod nobis est officii circa personam illius sicut decuit, auctore domino exequamur.

R. i. f. 57, A.D. 1241, Pope Gregory IX. confirms the election of John Sarracenus as dean, his own nominee, and the right of the chapter to elect a dean from among the canons, according to the "*antiqua et approbata consuetudo, decanatu vacante, unum de ipsis canonicis sine contradictione in decanum eligere.*"

<sup>b</sup> Matt. Paris, *Historia Anglorum*, iii. 42 (R.S.).

in the masonry, which are to be seen in the eastern parts of the nave.<sup>a</sup> If, on the other hand, it was a cap or spire of the central tower which fell upon the vaulting of the transept at the junction of nave and transept, we may look for differences in the masonry of the transept under the tower and on the columns and capitals of the transept as a mark of this time. But the silence of the chapter registers on such a disaster may suggest that the damage done was less than was reported by the bishop, absent probably at Rome at the time, or that the chapter in 1249 were so absorbed by their debts that they could not enter upon the repairs of the fabric.

For forty years the chapter had been recovering from the pressure of debts and preparing for new buildings. It is in the year 1286 that the registers give the first sign of that building activity which went on for at least the next fifty years. The dean at the time was Thomas of Bytton, one of the third generation of that family in Wells, nephew of the late bishop William, elected by the canons as dean in succession to Edward de la Cnoll in 1284.

On the Tuesday after "Quasimodo," April 26, 1286, dean Thomas summoned a full chapter of residents and non-residents to take into consideration, in the first place, the urgent necessity of finishing the new structure which had been long in progress, and of restoring and keeping up the older fabric, and at the same time the insufficiency of the means of the chapter for the work, "*inspecta ante cetera necessitate urgente quam dicta ecclesia patitur, tam in nova structura jamdiu incepta perficienda quam antiqua fabrica ipsius reficienda et sustentanda, et ad hec assignatarum insufficientia facultatum.*"<sup>b</sup>

The canons coming up in great numbers resolved unanimously that each canon should give to the fabric a tenth of his prebend yearly according to the taxation of Norwich of 1254, for five years, to receivers appointed by the chapter, and that defaulters should be fined half a marc for failure of payment within fifteen days of the quarter-day and be further liable to distraint and excommunication.

This resolution of the chapter meeting formed an important precedent which was quoted and acted on in later stages of the work.

The work before the chapter was twofold; to put in repair the old work, and to complete the new structure which had been begun some time before.

We do not know if the repairs required at this time were more than the normal dilapidations of an old building. The high authority of Professor Willis

<sup>a</sup> Freeman, *Cathedral Church of Wells*, 76, 77.

<sup>b</sup> Cf. R. i. f. 198 and R. i. f. 200 in 1337.

may be cited that the "new structure" begun, "*diu incepta*," and as yet incomplete "could be no other than the chapter house."<sup>a</sup>

Hitherto there is no evidence of the existence of a chapter-house, or of any definite place where the dean and chapter were wont to meet in council. They met probably in some part of the church, or in one of the chapels.<sup>b</sup> The important position of the capitular body in the home government of the church to which they had now attained demanded that, after the example of other cathedral churches, there should be a worthy council chamber of the dean and chapter where they should daily meet for communion in council, for enactment of discipline, and ordering of ritual.

This chapter act gives the first intimation that this new work had been in progress for some time.

Professor Willis gives the general description of the divisions of the chapter-house: "It stands upon a vaulted substructure, by which its floor is considerably raised above the floor of the church. This substructure cannot well be called 'a crypt,' for it is not sunk under ground, the springs of water in the soil forbidding such a building; it is entered from the north aisle of the choir by a doorway and passage. The floor of the chapter-room is reached by a building attached to its western side, which contains a staircase lighted by great windows of early geometrical tracery and leading to the elaborate doorway of the chapter-house. The style of the chapter-room itself is so greatly in advance of the substructure and stairs as to show that a considerable interval of time elapsed between the one and the other." Again, he says, "I conceive that in 1286 the portion of the chapter-house called 'the crypt' was completed."<sup>c</sup> If so in 1286 there stood on the north side of the church east of the north transept a detached octagonal building, on a slightly lower level than the floor of the church, which was the substructure and the first part of a building as yet incomplete.

Of this "crypt" the thick outer walls, and the mouldings of the wall shafts, the narrow lancet windows with wide splays in each bay, are of somewhat earlier date than the central pillars supporting the vault. The vaulting is remarkable for the way "in which the arches are disposed without the introduction of ribs." Traces of "dog tooth" ornament on two of the capitals betoken an early date in

<sup>a</sup> *Somerset Archaeological Society's Proceedings*, xii. 20.

<sup>b</sup> On one occasion, August 29, 1244, they met in *capella beate Marie*, the southern Lady Chapel probably, to take action against the summons of the papal delegates to meet them in the greater church "in *Majore Ecclesia*." (R. i. f. 97 in dors.)

<sup>c</sup> *Archæological Institute, Memoirs illustrative of the history and antiquities of Bristol, &c.*, xxviii.

the century. All these are indications that building had been begun awhile, "diu incepta;" had been going on through the time of Edward de la Cuoll, through the last forty years, and perhaps like the undercroft of the palace, during the later years of bishop Jocelin.

The solidity of this substructure shows that the building was meant to be the basement story of a higher building, and the great size of the central pillar the root of an uprising shaft to stand upon it. At the same time, the massive character of the ironwork of the thirteenth century in the bars and bolts inside and outside of the double doors, the deep sockets in the thickness of the walls on each side of the door and above and below, for the drawbars with which the inside doors were protected, the recess in the thickness of the wall on the south side, are evidences that the building was used as the "treasury" in which all valuables, of money, vessels, documents, were placed. Here was the *thesauraria* of the church, round which the processions passed on the days of perambulation of the north side of the church, which is mentioned on several occasions in the registers. This was the building finished by 1286.<sup>a</sup>

The next stage of building dates from 1286, and from this action of the dean and canons. At this time Robert Burnell was bishop (1275—1292), one of the greatest men in the kingdom as minister of Edward, chancellor, the great lawyer of the time. The year before, 1285, is marked in constitutional history by the promulgation of statutes of great importance, "the culminating point of Edward's legislative activity"<sup>b</sup> the statutes of Westminster, June 28; the statutes of Winchester, October 8. In that year the bishop had obtained a royal licence to raise an embattled wall, "kinnellare," round the cemetery of the canons and the precincts, "precinctum," of the houses of the canons at Wells.<sup>c</sup> It is doubted whether any of this work was carried out by him. The only work ascribed to him by Godwin is the chapel of the palace, and the stately hall which still witnesses in its ruin to the magnificence of the builder. But Burnell was too much engaged in state affairs to be resident long, if at all, at Wells. "He was much employed in Welsh affairs, from which he could ill be spared. So the king was content for a while to let him keep his court of Chancery at Bristol,"

<sup>a</sup> R. i. f. 131, in dors. Memorandum. Deeds relating to the churches of Bath and Wells, to North Curry and Wyuescumb, St. Cuthbert's, Congresbury, &c., were delivered to Edward the dean to be carried to London at the command of the archbishop on Saturday next before St. Michael, and were brought back by him on St. Crispin and Crispennas day and replaced in the "Treasury" --Oct. 25, 1281.

<sup>b</sup> Stubbs, *Constitutional History*, ii. 122.

<sup>c</sup> R. ii. f. 18.

1284—1285. In May, 1286, he went with the king to Gascony, and was out of England until August, 1289.

This royal licence to fortify and embattle the cemetery wall and the precincts was one of several given about the same time to cathedral closes. In the 14th of Edward I., 1286, licenses were given to Exeter on January 1; to Wells in April; to Lincoln, Salisbury, and York in May; to St. Paul's in June. Perhaps it was the king's policy to multiply fenced places to give greater security throughout the land.

A similar license with the addition only of the words "*et precinctum domorum suorum*," is given by Edward III. to bishop Ralph, sixty years later in 1341.<sup>a</sup>

But though little resident, the bishop was encouraging and assisting the work which was going on in the church at Wells, by granting indulgences (*R. iii. f. 389*), and by the gift of advowsons of churches, Yeovilton, Burnham, Stanton Drew, and Chelwood, to the chapter for the fabric fund, "*ad fabricam sustentandam*." He had also taken steps to appropriate the church of Burnham to the chapter, but he died before the appropriation was effected. Bishop Haselshaw afterwards carried out his good intentions. In return, the dean and chapter, after bishop Haselshaw's death in 1306, endowed two chantries for the two bishops at the altars lately constructed at the entrance into the choir, the one in honour of St. Mary, the other of St. Andrew.<sup>b</sup>

What was the work of this time?

A vaulted passage leads from the crypt to the north aisle of the choir, the doorway of which in the north aisle is cut through the older wall of the church. This was probably the next portion of the work after 1286, followed by the building of the grand stairway of thirty-two steps leading upwards from the north door of the transept. This north door was a door of Jocelin's church, and on the outside the moulding remains which shows that there was a small vestry attached to it. It corresponds exactly in position to the door of the south transept now blocked up by the monument of Chancellor Storthwaite in St. Martin's chapel, which also had a penthouse or vestry on the south side. The ascent of the stairs

<sup>a</sup> Pat. 14 Ed. III., pt. I, m. 13.

<sup>b</sup> R. i. f. 164. Chantries of bishops Burnell and Haselshaw founded. Confirmation Kal. Feb. 1306, by chapter of Bath of the deed of foundation, by dean Godley and chapter of Wells, 5 Kal. Jan., 1306.

Notanda:

£10 allocated by Wells chapter, "*de bonis nostris*," for support of two chaplains.

Two altars "*ad hoc constructa*" ad ingressum chori.

The king Edward the first and Royal family included in the intercessions.

was lighted by two great windows of early and very beautiful geometrical tracery, and flanked by tiers of stone seats rising with the stairs, which curved round to the portal and double-arched vestibule of the chamber. This we may suppose was the work of Burnell's time, and of dean Thomas and of the canons from 1286 to 1292. Whoever was designer and architect of this noble ascent up to the chapter-house, which is the distinguishing characteristic of the chapter-house of Wells above all its contemporaries, it is a work worthy of the princely builder of the palace hall. The large windows which light the west side of the stairs, and in which the rich brown glass gives screen from the western evening sun which strikes full into the hall, are grander likenesses in form and tracery of the windows in the little village church of Acton Burnell, which was built by the bishop at the family manor and castle in Shropshire.

On October 22nd, 1292, bishop Robert Burnell died at Berwick, while with the king in his Scotch wars. His body was brought to his church at Wells, and buried "before the altar on the south side of the entrance into the choir;" but no stone or inscription now marks the burial-place of one of the greatest statesmen, though not a very saintly bishop, of the see.

Godwin says, Burnell "lieth buried in the middle of the body of his church under a marble stone somewhat below the pulpit," "*paulo infra suggestum.*"<sup>a</sup> He means the stone pulpit in the nave, built by bishop Knight in 1516. Carter's plan (1798) shows a large slab containing the matrix of a brass in the south of the nave between the third and fourth pillars west of the tower. That has disappeared.

Another and a third stage in the building was going on under bishop William de Marchia, 1293-1302, Walter Burnell, 1292-1298, and Walter de Haselshaw, 1298-1303, as deans; Haselshaw succeeded to the bishopric and died 1308.

William de Marchia, canon of Wells, had been one of the king's agents at Rome in 1284 to obtain from pope Martin IV. concession of the tenths from the clergy for five years for the support of a crusade which Edward undertook to join.

In 1289 he sat with the chancellor Burnell on a commission to hear the complaints brought against the judges during the king's absence in Gascony.

In 1290 he was made treasurer of the kingdom.

The copy of the deed of submission of the Scottish chiefs to Edward as overlord in the Wells archives is attested by him as treasurer in 1291.<sup>b</sup>

<sup>a</sup> *De Præsulibus*, 426, ed. 1743.

<sup>b</sup> *Fœdera*, ii. 274, ed. 1727. This deed was sent to Wells to be enrolled in the chapter archives, July 9, 1291. R. iii. f. 22.



He was rewarded with the bishopric in succession to the chancellor for his services to Edward in financial difficulties.

A vague tradition has assigned to the time of bishop William the whole building of the chapter-house. Godwin says "In this man's time the chapter-house was built by the contributions of well-disposed persons." We are familiar with the local habit of ascribing to one man, or period, as to bishop Jocelin and his time, the progressive work of several generations. But in this case so little is recorded of the bishop during his episcopacy, in comparison with his predecessor and his successors, that it has been difficult to account for the tradition, and still more for the extraordinary respect paid to his memory by the dean and chapter, and for their strenuous efforts to obtain his canonization.<sup>a</sup>

One original charter in the chapter archives may suggest a reason for this posthumous gratitude and for the tradition which ascribed to his time pre-eminently, the building of the chapter-house.

The pope Martin IV. had granted to Edward a tenth of all clerical incomes for five years in 1284, in aid of a promised crusade. The crusade was deferred, and in 1291 Nicolas IV. renewed the grant to Edward.<sup>b</sup>

The two chapters of Bath and of Wells were the sub-collectors for the diocese under Oliver Sutton, bishop of Lincoln, and John de Pontoise, of Winchester, executors for the kingdom. A deposit of 1,000*l.* was lying in the hands of the chapter, held "*in subsidium terræ sanctæ*," while the crusade was deferred. By a deed<sup>c</sup> dated Dogmersfield, Jan. 20, 1295-6, bishop William gave to the executors

<sup>a</sup> His registers could not be recovered by his successor, Reg. Droghensford, f. 34. Monition was issued to Antony Bradney, executor of bishop William, to render them up. Pucklechurch, Feb. 8, 1310.

<sup>b</sup> *Fœdera* ii. 274, 499, 517, ed. 1727.

<sup>c</sup> *Orig. Doc. No. 138.* The original document (No. 138) incorrectly endorsed in a later handwriting "Bp. Willm receives £1,000 for the Holy Land Warrs," and having a fragment of a bishop's seal, is here transcribed. It runs thus:

"Universis videntibus hanc scripturam Willelmus permissione divina Bathoniensis et Wellensis Episcopus salutem in domino sempiternam. Noveritis quod cum nos, episcopus supradictus, Thomas Prior et conventus Bathoniensis W. Decanus et capitulum Wellense recognoverimus per nostrum scriptum obligatorium nostrum et cujuslibet nostrum ac ecclesiarum nostrarum nomine nos recepisse [de]positum et habere a reverendo patre O [livero Sutton] dei gratia Lincolniensi Episcopo executore, una cum venerabili patre domino J[ohanne de Pontissara] eadem gratia Wintoniensi Episcopo legitime impedito, super decimis domino E[dwardo] dei gratia Regi Anglie illustri in subsidium terræ sanctæ concessis in regno Anglie a sede apostolica deputato, mille libras bonorum et legalium sterlingorum in pecunia numerata de pecunia decimæ antedictæ restituendum predictum depositum prefato domino Lincolniensi Episcopo vel collegæ suo aut alteri

a bond for repayment of this sum of 1,000*l.* whenever it should be required. It appears to have been already borrowed by the bishop and the two chapters conjointly, with promise of repayment on demand within one month. Now the bishop makes himself solely responsible for repayment, and pledges (no doubt with consent of his chapter) the diocesan revenues and his personal property as security for repayment to the collector.

"Inasmuch as the money had come into his hands and had been spent on diocesan objects "in nostris et nostri episcopatus feliciter expediendis totaliter est conversum," he will promise to hold the two chapters free from all liability "et ipsos indemnes undique quoad hujusmodi depositum conservare."

There is no evidence to show how this 1,000*l.* was spent, or that it was ever repaid, or called for by the executors. The chapter kept this bond as their security.

At his death the bishop devised a sum small in comparison, 100 marcs (66*l.* 13*s.* 4*d.*) to the chapter to be held by them in deposit for the crusade "ad subsidium terræ sanctæ" and "usque ad generale passagium ad terram sanctam proxime faciendum" but with ultimate reversion to his brother, and then to his nephew Robert Urry, if the crusade were abandoned.

This deposit in after years became a subject of much trouble to the chapter, as hungry suitors wooed the chapter for it. Bishop Drokensford borrowed it. Edward II. asked to borrow and finally demanded it, as a loan. The papal nuncio adjudged it to the nephew, and the nephew claimed it. The chapter, having yielded to the king's demand, were unable to surrender it and pleaded that by the terms of the will the time for reversion had not yet come.<sup>a</sup>

eorundem succedenti vel succedentibus in officio execucionis predicto infra unum mensem postquam nos aut aliquis nostrum conjunctim seu divisim per dictum patrem aut collegam suum vel aliquem alium seu alios quem vel quos tangit officium execucionis predictum, fuerimus requisiti prout in scripto hujusmodi obligatorio plenius continetur. Quia tamen depositum mille librarum supradictum ad nostras solum modo manus pervenit et in nostris ac nostri Episcopatus negotiis feliciter expediendis per nos totaliter est conversum, indemnitatibus prioris et decani predictorum ac capitulorum ipsorum providere volentes, dictum depositum predicto patri Lincolnie Episcopo vel collegæ suo predicto aut sibi succedentibus, ut premittitur, vel succedenti reddere seu restituere, quando oportuerit, promittimus bona fide et ipsos indemnes undique quoad hujusmodi depositum conservare. Et ad hoc fideliter faciendum obligamus nos executores et successores nostros ac omnia bona nostra presenciam et futura ecclesiastica et mundana ubicumque inventa. In cujus rei testimonium sigillum nostrum presentibus est appensum. Datum apud Dogmerfeld xiiij<sup>a</sup> kalend. Februarii anno domini millesimo ducentesimo nonagesimo quarto."

<sup>a</sup> R. i. f. 119, 132. Receipt by the dean and chapter, Sept. 17, 1311.

Reg. Drokensford. The bishop has borrowed it, 1311.

R. i. f. 376. Order (in French) from Thomas de Berkele, one of the executors, that the money be sent to London "al hostal de deen de Seynt Poul," 1311.



We do not know sufficiently the nature of the transaction, but it is probable that the treasurer-bishop who knew the king and the danger there was lest the sum of £1,000 lying in the hands of the chapter might be swept into the king's coffers, took this method of securing it for the service of the church in his diocese at his own personal risk

And if such a sum, or part of it, was spent by him on the chapter-house it would reasonably account for the gratitude of the chapter and for his fame as a benefactor to the church.

But there must have been other grounds and some high qualifications which won for him such strong testimonial from his contemporaries and influenced so many to join in seeking his canonization according to the fashion of the time.

Certainly for years after his death money was collected in the diocese for his translation and honourable burial, and the stately tomb in the south transept is a remarkable monument of contemporary gratitude. The letters written by the dean and chapter bear high testimony to the virtues of his life, as "the good shepherd," and to the effulgence of miracles at his tomb, and the highest personages in the kingdom were moved to use their influence at Rome in support of the prayer of the chapter.<sup>a</sup>

It is pleasant at least to read a contemporary eulogy from those who had lived with him as a set-off against the detraction which followed his memory from others.

R. i. f. 208. Order from official of papal nuncio that the money is to be paid to the brother, 1313.

R. i. f. 159. The king, Edward II., wishes to borrow it. They will lend it for two years, and pray that the king will hold them "indempnes versus dominum papam," 1326.

R. i. f. 202. The king sends to demand it. Edward III., i. f. 205, 208. The papal nuncio orders it to be paid to the nephew, according to former injunction, 1340.

R. i. f. 209. They plead that the time for reversion has not come, 1340.

<sup>a</sup> 1324, June 2. R. i. f. 172. Laurence de la Waar, the king's ambassador, is urged to take up the suit for the canonization against the machinations of John de Britton, the adversary.

1324, June 2. R. i. f. 171. Letters to John de Grandison and to Robert Baldock, the chancellor.

1324, June 4. R. i. f. 172. A précis of letters to influential persons. Bishop Drokensford writes to Rome.

1325, Dec 4. R. i. f. 174. The king, queen, archbishop Walter, and eight bishops petition the king for his canonisation.

1326, Dec. 26. R. i. f. 163. Dean and chapter acknowledge tenths from all benefices in the deanery of Axebridge for the new buildings of the church and for the translation and honourable entombment of the body of bishop William.

The same terms are used in all the letters from the chapter describing him as "vitæ sanctæ, conversationis honestæ, bonus pastor in ministerio sacerdotali, pauperibus et miserabilibus personis compatiens, elemosinarius largissimus," etc.

But yet all their efforts were in vain. The "machinations of the adversaries" at Rome were too strong for them. Matthew of Westminster and Polydore Virgil are quoted by Godwin as representing the grounds of opposition, "they complain grievously of bishop William as the author of a grievous sacrilege in causing the king to spoil all the churches and monasteries of England of such plate as lay hoarded up in them, for payment of his soldiers." Godwin, who says he had seen these documents in the chapter muniments, goes on to give his own opinion that the bishop was made a scapegoat to bear the offence of the king's arbitrary acts in obtaining money. "Edward was a prince that would neither want wit to devise nor courage to execute such an exploit, and to lay the fault upon another at last, which, how undeservedly soever, might barre him out of the pope's calender."<sup>a</sup>

Evidences are not wanting that there were "other well-disposed persons" who were contributing at this time to the fabric and the chapter-house. William of Wellington, one of the canons, gave about this time forty marcs "to the needs of the church and to the fabric of the chapter-house." The dean and chapter in 1300, "desiring to return spiritual things for temporal," endowed an obit for this benefactor with 10*l.* a year charged on the manor of North Curry at the altar of Holy Cross, under the bell-tower on the north side of the church.<sup>b</sup>

Such a benefactor probably was William de Rous, sub-dean, after whose death, in 1290, bishop Burnell granted forty days indulgence from penance throughout the diocese to all who should come to the church and pray for his soul at the altar of St. Mary Magdalene.<sup>c</sup>

Henry Husee, canon, precentor, and afterwards dean in 1302—1305, gave to the chapter 200*l.* on condition that they endowed his obit with 10*l.* annually.

<sup>a</sup> Godwin's *de Proculibus*, p. 375, Ed. 1743. In 1282 Edward had seized the treasure accumulated at the Temple, for the Welsh war. (Stubbs' *Constitutional History*, ii. 119.) An attempt to obtain canonisation for archbishop Winchelsey was going on about the same time, 1319-1326. *Litteræ Cantuarienses*, 397, 401 (R.S.).

<sup>b</sup> R. iii. f. 284. "Ad altare sanctæ crucis juxta ingressum ecclesiæ subtus campanile in boreali parte." The chapel in the north-west tower, now the chancellor's consistory court, was the chapel of Holy Cross.

<sup>c</sup> R. iii. f. 289.

This was celebrated at the altar at the entrance of the choir, and his monument was afterwards raised by the executors in the chapel of St. Calixtus.<sup>a</sup>

Dean Walter de Haselshaw gave 10*l.* to the chapter for the lifetime of Walter de Charleton, one of the canons, for which they gave an acquittance to his executors in 1317.<sup>b</sup>

### III.—BISHOP DROKENSFORD AND DEAN GODLEY. 1305—1333.

Whatever may have been the share of bishop William de Marchia in obtaining funds for the building of the chapter-house in his life, and after death, the credit of carrying to completion the last stage of building belongs to dean John Godley (Johannes de Godelee), the greatest builder of the church since Jocelin. Prebendary in 1301, during the last years of bishop William's life and during the episcopate of Walter Haselshaw, he was elected to succeed dean Husee in 1305, and he held office for twenty-seven years until February 1332—3. During his earlier life he must have watched the first stages of the building, the growth of the great ascent, and of the noble portal, and the gradual rise of the outer walls and buttresses of the great octagonal building on the north of the church. At first we may suppose a temporary roof covered in the stone floor raised upon the vault of the substructure. On this floor may yet be traced the diagrams perhaps of Godley's architect, which may have supplied the working drawings for the masons in the interior arrangement of windows and vaulted roof which rose above it in dean Godley's time.<sup>c</sup>

Familiar with the designs of the first builders, he and his master-mason, William Joye, worked them out and brought the whole to its present perfected beauty in the first fifteen years of his government.

John of Drokensford (Droxford in Hants) was bishop for the greater part of dean Godley's time, succeeding bishop Walter in 1309, and dying three years and a-half before the dean in 1329.

His register is the first in the series of episcopal registers in the bishop's registry at Wells; and the calendar of that register, lately edited by bishop

<sup>a</sup> R. iii. f. 103-109

<sup>b</sup> R. i. f. 140.

<sup>c</sup> Mr. Irving writes: "That wonderful collection of working drawings now remaining on the floor of the first chapter-house. There is not such a collection elsewhere in England, and I earnestly hope that such an unique collection may be illustrated by the Society of Antiquaries."

Hobhouse for the Somerset Record Society, gives the materials for a fuller knowledge of the bishop's life and times.<sup>a</sup>

He belonged to one of the lawyer-statesman class of bishops. He had held several lay offices under the crown, and was rewarded by an abundance of ecclesiastical benefices. At the time of his election he held office about the king's person as keeper of the wardrobe, was canon of Wells and of four other cathedral churches, and held prebends in five collegiate churches, and other benefices in different parts of the kingdom.

"Wells was not used by him as headquarters, save that the dean and chapter furnished him skilled commissaries for his varied commissions, and Bath was no centre of diocesan action."<sup>b</sup> It is no wonder that as he moved about from one to another of his manors, and of his sixteen official houses, he should have left to the dean and chapter the home government of the church, or that with little time to study the annals of his church he should have come into collision with his chapter when he assumed rights of episcopal jurisdiction which had been ceded by previous bishops to their officers in the chapter.

It is to dean Godley that we owe the preservation of early chapter documents and the formation of the first of the chapter registers, the *Liber Albus* (R. i.), in the chapter archives. He had known the full value of these early charters in establishing the dean's position in the great controversy with the bishop; and in the last year of his life he ordered that they should be carefully copied, examined by the chancellor and others of the chapter in presence of a notary, "sub manu publica," and enregistered, lest these floating and perishing leaves, which are the treasures of the church, and contain the primary elements of its history, should perish through neglect or age.

"Item quod quædam chartæ nostræ quæ sunt velut thesaurus ecclesiæ in parte sint debilitatæ, quædam vero quasi vetustate consumptæ, volumus quod per disertos viros concanonicos nostros, præsentē ecclesiæ cancellario qui curam et custodiam habet eorundem, circa festum Sancti Michaelis examinentur et in uno registro de verbo ad verbum conscribantur et quam citius commode fieri poterit sub manu publica auctoritate iudicis competentis ad perpetuam rei memoriam publicentur, saltem illæ de quarum consumptione magis timetur."<sup>c</sup>

<sup>a</sup> *Somerset Record Society*, vol. i. Drokensford's Register, 1887.

<sup>b</sup> Preface to the Register by bishop Hobhouse, p. xviii.

<sup>c</sup> R. ii. f. 24. "The early part of this Register I., or *Liber Albus*, was written" (Mr. Riley says in Report I. of Historical Manuscripts Commission), "in the reign of Edward I. or possibly Edward II." The date is fixed more precisely by the order of dean Godley. Mr. J. A. Bennett says in

The registers of bishop and of chapter now can be read together to illustrate and confirm one another. The notices of the building now become more frequent, yet they are few and fragmentary considering the importance of the works in progress. Yet we can trace from these short and scanty chapter acts what an amazing activity was manifested by the chapter in raising those parts of the fabric which distinguish the present church from the church of Jocelin and of the thirteenth century. Within the time of dean Godley's twenty-seven years

- (a) The central tower was raised and roofed in ;
- (b) The chapter-house was finished ;
- (c) The Lady Chapel was built from the ground ;
- (d) The choir was being refitted and prolonged eastward ;
- (e) The parapet round the whole of the earlier church was renewed.

The chapter records contain the notices from time to time, which enable us to affix certain dates to most of these buildings in progress and in completion.

During the first decade of dean Godley's rule (1305—1315) no mention of the fabric occurs.

But with the year 1315 commences a series of short notices from time to time which indicate the progress of the works then going on.

In 1315 a commission was going through the diocese under the official of the bishop and the official of the dean to levy money for the work on the tower, "campanile," of the cathedral church. The bishop had assigned to that object the fees received for non-residence and other sources.<sup>a</sup>

In 1318, May 8, an important chapter meeting was held, of which the minutes are given with unusual detail.<sup>b</sup> One of the foremost questions discussed was how to deal with defaulters who had not paid the "decima quinquennalis," agreed upon at the last chapter, towards the "new campanile." They were to be proceeded against by censures and sequestrations.

It was announced that large sums were coming in for the fabric and the new campanile. These funds were coming in

his preface to the "Calendar of Wells Manuscripts," (Appendix 3 to volume 10 of Report to Historical Manuscripts Commission): "this volume was probably once bound in black and called the 'Liber Niger,' to which there are references in the chapter acts. The earliest entry is of the time of Edward the Confessor, the last belongs to the year 1393."

<sup>a</sup> Reg. Drokensford, f. 81. "Commissio ad levandam pecuniam concessam fabricæ campanilis Wells." Banwell, July, 1315.

<sup>b</sup> R. i. f. 143. Archer sums up the purpose of this chapter meeting, "ad constructionem novi campanilis finiendam."

(a) From the tenths of the assessments on the prebends of the canons, the "decima quinquennalis;"

(b) From the offerings made at the tomb of bishop William (de oblationibus Sancti Willelmi) who was already canonized by popular voice without waiting for the decree from Rome.

(c) From the collections made throughout the diocese by the "fraternity of St. Andrew," a brotherhood formed at this time to raise funds for the cathedral fabric. They collected the sums which were given as the "cathedraticum," or by bequest, to the fabric fund. They published the bishop's "indulgences" and letters to stimulate parochial collections, and they carried the year's collection to Wells for an audit now appointed by the chapter, or "paid it to a lessee who had agreed to give a fixed sum to the chapter."<sup>a</sup>

In 1318—1319 the central tower was being built. In 1321 it was finished, at least raised up high enough to be roofed in.

In August 1321 the chapter borrowed 40*l.* (= 800*l.*) for building purposes, "*quadraginta libras in fabrica ecclesie reparanda impendendas*,"<sup>b</sup> and on December 23 in that year they acknowledged the grant of one penny in the pound from the benefices of the clergy of the deanery of Taunton for the covering in of the tower, "*in subsidium cooperturæ novi campanilis ecclesie Wellensis*." They acknowledge with gratitude this voluntary gift and undertake that it shall not be made a precedent for a demand in other times.<sup>c</sup>

So in 1322 we have reason to suppose that the central tower was successfully finished.

In these same years, while the tower was being built up, the chapter-house was finished and the chapter entered it. We can say now that in 1319 the chapter meetings were held in the new "*domus capitularis*;" perhaps for the first time on the occasion of the contest with bishop Drokenesford as to his right of holding there his ordinary visitation of the cathedral church. Hitherto throughout the registers the meetings and acts of the dean and chapter have been described as "*in capitulo*," but no place of meeting has been definitely named. But now at

<sup>a</sup> See preface to bishop Drokenesford's Register by bishop Hobhouse, p. xxv. He compares the "Brotherhood of St. Chad" at Lichfield. The upper parts of the western towers of Tours cathedral church were built by the "Brotherhood of St. Gatien," in the fifteenth century.

<sup>b</sup> R. i. f. 155. Bond of the dean and chapter to Richard, "*dicto Richeman de Well*," for £40 borrowed "*per manus R. de Baker custodis fabricæ ecclesie Wellensis ad usum ejusdem ecclesie*," 20 kal. Sept., 1321.

<sup>c</sup> R. i. f. 157. Dec. 23, 1321.



the opening of this controversy, dean Godley for the first time summoned the chapter to meet on the Wednesday after the translation of St. Thomas, July 1319, "in domo capitulari ecclesiæ Wellensis."

"Reverendus vir dominus Joannes de Godelee decanus . . . omnes canonicos per pulsationem magnæ campanæ juxta modum et consuetudinem ejusdem ecclesiæ fecit evocari, quod comparerent in domo capitulari ecclesiæ Wellensis die Mercurii proximi post festum translationis beati [Thom. *erased*] martiris anno domini MCCC<sup>mo</sup> nono decimo." R. ii. f. 31.

Now and from henceforth generally but not universally the place of meeting is thus named in important chapter acts "actum est in domo capitulari."

The chapter had now achieved the completion of their "domus capitularis," their council chamber; the place of business and legislation of the capitular body in its several grades of governors and governed, as a great landed corporation in the shire, and as a great religious and educational institution, the place of discipline and of regulation of ritual.

The building was for the most part the creation of the capitular body in the past and in the present, and its rise to greatness and dignity was a sign and record of the rise and culmination to power and to independent jurisdiction of the chapter which had grown up from small beginnings to have a responsibility shared with the bishop in the guardianship and government of the church, and independence in the management of its own internal affairs.

In the outer walls and interior arrangement of this noble octagonal chamber, with its fifty-one canopied stalls, in the engaged shafts and rich mouldings and tracery of its eight noble windows, in the tall central pillar branching out, palm-like, to support the vaulting and the arcaded roof above, in the characteristic mouldings and distinctive ornaments, such as the ballflower in the window mouldings, we have one of the best examples of the "Decorated" order of architecture, at the beginning of the fourteenth century, the years of the second Edward, 1307-1327.

Of the chapter-house of Wells it may as truly be said, as of its rival at York which lacks the unique stately grandeur of the ascent of winding stair, and the grace of branching central shaft:

" Ut rosa flos florum,  
Sic est domus ista domorum."

O rose of flowers fairest!  
O house of beauty rarest!

The chapter-house was finished by 1319. It is pleasant to be able to connect the name of the master builder who was working with dean Godley in the prosecution of these great works. In a chapter act at this time, but of which the actual date is illegible, a life pension of forty shillings is granted by the dean and chapter to William Joye, master of the fabric, "*magistro fabricæ*," for his faithful services to the church, "*pro bono et laudabili suo obsequio nobis et ecclesiæ nostræ*," and his services are retained, as hitherto, to superintend the fabric and repair defects.\*

Again, in 1329, a further pension of 36*s.* 8*d.* is given to him, with the same condition of retaining his services, "*quolibet anno et quotiens opus fuerit, inspicere defectus reparandos in ecclesia nostra, et consilium et auxilium impendere.*"<sup>b</sup>

We cannot fail to remark the coincidence of the conflicts about jurisdiction between bishop and dean and chapter with the first mention of the entrance into the new chapter-house.

The bishop may have wished to make his formal entrance into the new building by an assertion of episcopal jurisdiction, and a challenge of the alleged immunities of dean and chapter from his ordinary jurisdiction over the several persons and prebends of the church. It may be that, as a great state officer whose duties occupied him much outside his diocese, he had yet to learn the history of his church, and that the autonomy of the chapter was the growth of long years of custom, and the result of privileges and grants bestowed by his predecessors in the see. But it is certain that the chapter retained throughout their respect for the bishop and acquitted him of personal motives; they so fully considered that he had been instigated to action by his official principal, that after the settlement of the quarrel they petitioned the bishop to remove him from office, "*pro honore sua et pro pace et tranquillitate*;" as the cause of all the differences that had arisen between them, "*a quo tota dissensionis materia inter nos et vos sumpsit originem.*"<sup>c</sup>

When the charters of Reginald, Savaric, and Jocelin were exhibited to the bishop, he was forced to acknowledge that his rights by common law had been overridden by custom and special charters.

Before the question of jurisdiction had been settled, another subject of litigation was moved by the bishop's official. He claimed the two-thirds of the grants of vacant benefices, which had been granted by charters of Reginald and Jocelin

\* R. i. f. 179.

<sup>b</sup> R. i. f. 181.

<sup>c</sup> R. i. f. 157. William of Edyngton, clerk, was the obnoxious official. He was appointed 2 kal. Oct., 1318. Reg. Drok. f. 196.



to the dean and chapter as a fabric fund. The dean and chapter again protested.<sup>a</sup> But the rights of the dean and chapter to these sequestrations had such patent evidence in these charters, and their rights had been so successfully vindicated against previous bishops, according to proofs now put forward, that the bishop could not support his officials, and he withdrew his right of ordinary visitation, and conceded all the claims of the dean and chapter."<sup>b</sup> The controversy had lasted two years and more, from July 1319, to August 1321.

It is curious to find as a sequel to this controversy, in the very charter which accompanies the bishop's concession, the practical acknowledgment by the bishop that the chapter was also the guardian of the treasure of the church. He borrows for some special occasion from the treasurer of the church his necessary episcopal apparel, and gives a bond for safe return at a given date, or the value at his death.

On December 15, of this year 1321, he gives a bond to the dean and chapter for two mitres, to be returned at Michaelmas 1323, if required, a crosier, a gold and sapphire ring, sandals, and gloves; and the value estimated is to be paid by his executors at death.<sup>c</sup>

<sup>a</sup> R. i. f. 154, 155.

<sup>b</sup> Reg. Drokensford, f. 175c. "Memorandum: the bishop yields to the dean and chapter on points at issue:

1. Their claim to fruits of vacant benefices.
2. Their wonted jurisdiction over city and prebendal parishes.
3. The wonted jurisdiction of the three archdeacons. On each point with reserve.

Given at the Temple, London, 9 kal. August, 1321." The text of the controversy is published in "Wells Cathedral," H. E. Reynolds, appendix G. p. 133, transcribed from R. ii. f. 31, where it fills eight folios; see also R. i. f. 151, 156. It is curious that the mistake "Johannes Bathon. et Glaston. Episcopus" instead of "Jocelinus" runs through the transcript in the registers.

<sup>c</sup> R. i. f. 164. The two mitres are valued at 23*l.* 6*s.* 8*d.*, one 10*l.* the other 13*l.* 6*s.* 8*d.*; the "baculum pastorale" at 6*l.* 13*s.* 4*d.*; the gloves "cum nodis aureis" and the sandals valued at 2*l.* 10*s.* were all to be restored, "vel eorum estimationem in morte." Blakeford 18 kal. Jan., 1321." To carry on the story a little further, see R. i. f. 182, under date Oct. 23, 1329. Ralph of Shrewsbury had been elected bishop. He writes to the dean and chapter that his predecessor had sold a mitre to a bargess of London and if the chapter desire he will obtain it if possible, to remain *in perpetuum* in the church. They assent, and then they supply by the treasurer the bishop's apparel for his consecration, viz.: One mitre, value 100*s.*; a crosier, value 10 marcs.; a silver censer, value 4 marcs.; two silver candlesticks, 12 marcs, all to be restored on St. Michael's day after his consecration. More careful than before, they require receipt and security with oath on the Gospels from the bishop's factor for return on Oct. 23. Bishop Ralph also gives receipt and bond for return. Dogmerfield Nov. 13, 1329.

Cf. Inventory of the "treasor" of Carlisle cathedral church in 1325-1332, in *Proceedings of the Society of Antiquaries*, 2nd S. xii. 129.

These were some of the valuables kept in the strong room of the cathedral church, "the treasury" under the chapter-house, together with the muniments of the chapter and the documents of the bishop, of which the chapter were the guardians for the bishop.<sup>a</sup> The "*thesauraria ecclesiæ nostræ*" was also "*thesauraria nostra*," to the bishop.

During the years that followed work was silently going on, of which we see the results in 1326—1327. They were collecting money for another "new work."<sup>b</sup>

In June 1324, the letters were written to Rome for the canonization of bishop William de Marchia by the dean and chapter, and they were using all their influence at the English court to obtain the highest support. At the end of 1325, December 4, the queen Isabella wrote to the pope, and the archbishop and bishops, three of whom were leading members of her faction, viz., bishop Drokenesford, the bishop of Lincoln, and Adam Orlton of Hereford,<sup>c</sup> united in a petition to the pope for bishop William's canonization "on account of his many virtues and the many miracles which are wrought at his tomb."

The years 1324 and 1325 were troublous times, and it is evident that occasionally much disquietude was felt by the chapter in undertaking these great enterprises and incurring such expenses.

In January, 1325, a summons was addressed to the chancellor, Thomas of Retford, for a chapter meeting to consult on their policy, the state of their finances and the reformation of the church, "*super reformatione status ecclesiæ*," which had formed the subject of previous conferences, "*tractatus*." A general convocation of residents and non-residents was called "*ad deliberandum de convulso ecclesiæ Wellensis statu atque de rebus fere perditis ad pristinam dignitatem constituendis*."<sup>d</sup>

The preamble contains complaints of the oppressions under which the church has been "trodden down" "*modernis oppressionibus conculcata et deformata tot et tantis gravaminibus*." If we consider the political troubles of those years, and the heavy taxation of the clergy, such strong but vague words may be under-

<sup>a</sup> Reg. Drokenesford, f. 161-166.

<sup>b</sup> R. i. f. 171, f. 172.

<sup>c</sup> R. i. f. 174, see Stubbs, C. . ii. p. 370, writing of 1323-6. "The weakness of Edward and the policy of the popes, who sometimes played into his hands, sometimes defied him with impunity, had promoted to the episcopate men of every shade of political opinion and every grade of morality. Three of these, John Drokenesford, bishop of Bath, Henry Burghersh of Lincoln, and Adam Orlton of Hereford, had been implicated in the late rebellion." These three were among the petitioners, Dec. 4, 1325.

<sup>d</sup> R. i. f. 169. Datum in domo capitulari Wellen. 13 kal. Feb., 1324-5.

stood to have primary reference to the difficulties of the time under which their work was being carried on. There is nothing else to show that the building had suffered from any fracture or that these words refer to the subsidence of the tower, though from want of funds there may well have been some temporary suspension of the works; for soon after the work is going on.

Later on, in the year 1325, on November 10, there is a chapter memorandum that the bishop had given one half of the proceeds of his visitation to the "new work" of the church, and a collector, R. de Wamberg, is appointed to collect them. What is the "novum opus," now in hand?

The stalls in choir, perhaps of Jocelin's time, were now decaying, old-fashioned, and of bad style, "ruinosi et deformes." In the new zeal for the beauty of the church they were thought unworthy of the choir. All dignitaries are ordered to construct their stalls: "in vigilia Sancti Martini, 1325, ordinatum fuit eodem die quod canonici qui sunt in dignitate et officio, sumptibus privatis faciunt stallos suos et ad hoc per decanum compellentur." It was ordered, moreover, that each dignitary should spend thirty shillings "in stallo suo faciendo," and that a tax shall be levied half-yearly to that amount on each dignitary by a collector then appointed.<sup>a</sup>

There is a confirmation of this chapter act in the bishop's register, under date January 30, 1325-1326.

"The bishop then sent a circular to all rectors to stir their people jointly and severally in aid of the 'new work' going on at Wells Cathedral; the collection for this object is to take precedence of all other collections. An indulgence of forty days is promised, and it is ordered that a roll of the benefactors shall be sent in, who shall share in all benefit of the spiritual acts of the cathedral body." "

The renewal of the stalls of the choir is stated to be part of the "new work" in 1326. But the "new work," was a grander and much more costly enterprise. The new stalls could not have been meant for the old choir, which was cramped under the tower arches. The choir was to be extended eastward, and the choir and presbytery were now undergoing their great "reformation." It was doubtless the anticipation of this great and formidable work which had caused the chapter such anxiety and misgivings in the January before.

While the church was in a state of almost "demolition;" while the eastern

<sup>a</sup> R. i. f. 178.

<sup>b</sup> Reg. Drokensford f. 242a. Indulgentia pro novo opere Cathedralis Ecclesie Wellensis, Chew. 2 kal. Feb. 1325, 26.

end was being pulled down in order to build up the new north and south walls of the presbytery and the church was being extended, the appearance of things might well justify their alarm about the distracted condition and ruinous state of the church.

The renewal of their stalls was comparatively a light burden to put upon the canons while such great works were being designed and carried out by the energy of the dean.

For, in the same year 1326, another and a fourth "new work," as part of the great design, must have been brought to perfection.

The beautiful eastern Lady-chapel, a semi-detached octagonal building, was rising up outside the eastern wall of the church, and at first separated by some distance from the church.

During the years that the tower and the chapter-house were being finished, this fourth new work, the Lady-chapel, was being built under dean Godley and William Joy, the master of the fabric.

There is no direct mention of it in the register until incidentally we thus learn that the chapel is built, "*noviter constructa*." On June 4, 1326, the bishop gave canon Michael of Eston a parcel of ground in his garden near to the canon's house, measuring fifty feet eastward from the wall of the newly constructed Lady-chapel, "*a muro capellæ beatæ Virginis noviter constructæ*," and twenty-eight feet south towards St. Andrew's Well from the old wall of the bishop's garden.<sup>a</sup> A medlar tree in the midst of the garden was reserved for the bishop, and a path of eight feet wide, as if to give him access to it.<sup>b</sup>

So in 1326-27, the central tower, chapter-house, and Lady-chapel were finished, the stalls of the choir were being renewed, and the reformation of the eastern limb of the church was going on.

In that year, 1326, the queen Isabella and Mortimer were in rebellion against Edward II. These western parts of England were the scene of Edward's flight, imprisonment, and murder. In October 1326, the rebel party were at Bristol and the regency proclaimed. Adam Orleton, the former canon of Wells, bishop of Hereford, was the guiding spirit of the queen's party in the deposition of Edward in the parliament of January 1327, and the adviser of Edward's death. Edward was murdered at Berkeley on September 21, 1327.

<sup>a</sup> R. i. f. 175.

<sup>b</sup> Reg. Droghensford, f. 252b. "Bishop to canon Mich. de Eston. Grant of garden adjoining his house by the east end of new Lady Chapel and St. Andrew's Well. The medlar to be kept for the bishop with access by path eight feet wide.—1326."

Yet the work at Wells was ceaseless. There was work to be done in uniting the presbytery and choir of the old church to its new Lady-chapel; the presbytery and choir must be prolonged eastward; the walls were being built of the present eastern presbytery, the delicate triple arches supporting the eastern wall, with its unrivalled Jesse window, and its gallery of niches, and statues under the clerestory, and then the arcading of the processional path behind the high altar and leading into the Lady-chapel and its transepts. All this new work was yet to be done and was going on in the later years of dean Godley's life, and in the years 1326 and 1327 the clergy of the diocese were still contributing to this "new work" of the church, "in subsidio novæ fabricæ ecclesiæ Wellensis," and at the same time towards the translation and canonization of William de Marchia, whom the chapter were trying to enthrone as the local miracle-working saint of these latter days.<sup>a</sup>

But now the two chief actors in this eventful period were passing away. They were preparing for their end by endowing chantries and ordering services of commemoration and of intercession for their souls after death.

Bishop Drokensford had obtained license of mortmain from the king to the amount of 10*l.* per annum, and lands at Okehampton in Wiveliscombe, which were conveyed to the chapter as endowment of his chantry. He united Dean Godley with himself in the ordinance for the endowment of a chantry at the altar nearest to his grave. This ordinance was dated 1328-9, March 17.<sup>b</sup> He died on 9th of May following at Dogmersfield. He was buried at the entrance of St. Katherine's chapel, the "*capella beatarum Katerinæ, Mariæ Magdalenæ, et Margaretæ*," where his tomb shorn of its canopy now stands distinguished by his family arms blazoned on the spandrils of the niches.

<sup>a</sup> Reg. Drok. f. 251a, May, 1326. R. i. f. 165, Dec. 26, 1326. The clergy of the Axbridge deanery, and Reg. Drok. f. 267, Sept. 2, 1327, the clergy of the diocese, "*omnes et singuli*," give one tenth from their benefices for the canonisation of William de Marchia and the *novum opus* of the cathedral.

<sup>b</sup> The preface to the Drokensford Register by bishop Hobhouse supplies most instructive material for the life and character and times of the bishop.

R. i. f. 181. The dean and chapter appoint two chaplains to celebrate for the souls of Robert Cormailles and the bishop in the chapel of St. Katherine, 1329.

R. i. f. 193. St. Katherine's Chapel is the place "*ubi sepelitur*," 1333.

Reg. Drokensford f. 306. "*Ordinatio Cantariæ*." The chantry in the cathedral church at the altar nearest to his grave was still further endowed with houses in Wells. There was to be a daily celebration there for the soul of the bishop and dean Godley. The dean and chapter nominated the chaplain, with lapse to the bishop after one month. Chalice and vestments were given by the bishop to be in the chaplain's charge. Dogmersfield, March 17 1328-9

Bishop Hobhouse has supplied this note upon the Drokensford Tomb in Wells Cathedral :

"The tomb identified as bishop Drokensford's by his armorial bearings and the recumbent figure of a bishop stands under the arch of the southern transept of the eastern pair of transepts. (Both of these contain altars dedicated to St. John, the north one to the Evangelist, the south one to the Baptist.)

In recent times its plinth has been inscribed with the name of bishop Bytton II. and the name Drokensford cut on the canopied monument (which has no figure or brass) standing at the east end of the south aisle. Under the arch of the corresponding transept on the north stands a monument so like bishop Drokensford's that one description will apply to both. This last has been recently inscribed with the name of Dean Forrest, who died 1446.

The pattern of the tomb is peculiar. The panels of the sides are all blank, saving the canopied heads, which are through-cut from side to side. The heads are ogeed with crockets and finials above and cusps below. The slabs of Purbeck marble under the recumbent figure (which was highly coloured) are too thin to admit of inscription on the bevel.

A canopy rose overhead from pedestals at the four corners, but the bases of these pedestals alone remain. In each pair of spandrels over the side panels are emblazoned a pair of shields, the same pair again and again. One of these shields is identified as a Drokensford coat by the seal still appendant to a charter of Philip de Drokensford, the bishop's nephew, conveying land in Wiveliscombe for the endowment of his uncle's chantry, 1332, 6th Edward III.<sup>a</sup>

The other may be the older bearing of the family, which seems to have varied its bearings freely. The Essex Branch, seated at Elmford 30th Edward III., adopted another coat from the heiress of Jany.

Amidst many uncertainties Philip de Drokensford's seal makes us certain of his uncle's arms, and consequently of his tomb.

The outstanding questions are :

#### 1. *Architectural.*

Can the details of bishop Drokensford's tomb be ascribed to the period of his death, 1329 ; and, if so, how can we account for their being copied in the tomb of dean Forrest, more than one hundred years later, the ruling principle being to build in the latest style of the day?

#### 2. *The Relation to St. Katherine's altar.*

Bishop Drokensford, in the ordinance for his chantry, 1329, selected an existing altar, viz.: that 'nearest to where his grave should be.' In the endowment deed of the chantry, 4th Edward III. 1330, the chapel of St. Katherine and the Virgin is specified as the place where the two chaplains are to celebrate. This last chapel is at the east end of the south aisle. Its altar was twenty feet from the bishop's tomb. The altar of St. John's was less than six feet."

<sup>a</sup> Original documents, Wells Cathedral, 227. See Jewers's *Heraldry of Wells Cathedral*, 1892, p. 86, where the arms on the seal are described as *four swans' heads, couped and addorsed, in chief a label of three points* (i.e. the eldest son's difference).



Dean Godley had preceded the bishop in office by four years. He survived him for more than three years and a half.

In the year 1330-1, February 21, the chapter, under the presidency of the dean's friend Thomas de Retford the chancellor, marked their sense of the dean's merits as "a defender of the liberties of the church" by ordaining during his lifetime his mortuary services and decreeing a chantry. It was ordained that two priests shall celebrate masses for his soul at two altars, one at the altar in the cloister Lady-chapel, the other at the new altar of Corpus Christi not yet dedicated, "*ad altare in honorem corporis et sanguinis Christi constructum, et adhuc dedicandum.*" These prayers are to be said for the good estate of the dean, his brother Hamelin de Godelee, and his friend John de Bruton canons, during life, and for their souls and the souls of their families, and of the royal family after death.

A long array of county noblemen attest the deed, which thus takes the form of a public testimonial.<sup>a</sup>

The chapter announced his death within two years after, on February 9, 1332-3, "the Friday after the feast of St. Agatha."<sup>b</sup>

Where he died does not appear, but there is evidence that the dean was active to the last in his zeal for the church. In that last year, 1332, he obtained leave of absence from the new bishop Ralph of Shrewsbury.

The answer of the bishop in conveying the licence bears striking testimony to the bishop's appreciation of the greatness of the work which had been done, and of the dean's indefatigable zeal in carrying on what yet remained to be done. The bishop thus sets forth the grounds on which leave of absence is sought and granted: "*quum ecclesia nostra reparatione seu verius nova constructione indigeat, ac tu domine decane non solum ecclesiam nostram sumptibus tuis propriis reparare et pro maiore parte de novo construere, sed et ipsam defensare laudabiliter inceperis, nec possis huiusmodi incepta perficere nisi ad loca forinseca se transferes et remota*"; and then he heartily gives him God speed in his mission for the church: "Go where you will in your good purposes for the restoration of our buildings," "*Concedimus tibi ut vadas quocunque volueris, quamdiu circa fabricam ecclesiæ intenderis.*"<sup>c</sup>

In the last few weeks of dean Godley's life the young king Edward III. and

<sup>a</sup> R. i. f. 179. Details of the services to be held at each altar on different days follow.—Wells, Feb. 21, 1330-1.

<sup>b</sup> R. i. f. 191.

<sup>c</sup> *Excerpta a Registro Radulphi anno 1332*, Harleian MS. 6964, p. 62.

his queen kept their court at Wells, from Christmas to Epiphany, 1332-3, the first royal visit on record to the city. The fame of the new chapter-house and Lady chapel, the rising presbytery, and the jewelled window might well have attracted them.

The chronicles of the reign tell of a sumptuous outlay on the occasion: "*ubi fiebant multa mirabilia sumptuosa.*"<sup>a</sup>

Probably the presence of the court was a heavy charge upon the resources of the bishop and chapter, with large and unfinished work upon their hands.

The next year, February 12, 1333-34, when the king demanded a subsidy for the marriage of his sister, the princess Eleanor, the chapter of Wells prayed to be excused, pleading the ruinous and dilapidated state of their church, which would swallow up their common fund for more than three years.<sup>b</sup>

Two important charters belonging to the years after Godley's death may be selected as a sequel to this sketch of the works on the great building. They give a summary of the work on which he was employed. They show the yet unfinished state of the church at his death.

The immediate successor of dean Godley was Richard de Bury, but he soon passed to the bishop's seat at Durham, where he left an honoured name as founder of the great library.

1. Six months after dean Godley's death, July 15, 1333, the chapter gave formal release to his executors for all sums due from them as having passed through the dean's hands in his several enterprises during office.

They were thus enumerated:

1. The demolition of the church which had preceded new work begun, "*ratione demolitionis ecclesiæ Wellensis operis seu fabricæ ejusdem ecclesiæ per eum defunctum qualitercunque dum vixit inchoatæ*";
2. Completion of the new works on the fabric and on the stalls of the choir;
3. The canonisation of William de Marchia;
4. For moneys collected by him or for him for his work generally on the fabric, "*pecunias ad dictum opus seu fabricam dicte ecclesiæ receptas.*"

<sup>a</sup> "Chronicles of Edward," i. 356, R. S.

<sup>b</sup> R. i. f. 192. At the same time bishop Ralph sent £40 "*in maritagio Alienoræ sororis regis, et excusat se non plus posse dare ob quam plurima sua debita et æs alienum.*" Excerpta a Reg. Radulphi, f. 64, Harleian MS. 6964, p. 62.



They reserve a claim upon the executors for the return of some of the muni-ments of the church still in their hands.\*

This deed forms an honourable testimony to the integrity of the late dean as trustee of the large sums which had passed through his hands in these great undertakings, and to the exactness of his accounts now wound up within a few months of his death.

It is remarkable that no monument is known to exist in the church to this greatest builder since the time of Jocelin. It has been reasonably conjectured that the monument, on which a late hand has inscribed the name of dean Forrest, 1446, with recumbent figure and defaced inscription, which stands at the entrance to the north transept of the lady chapel, corresponding in position to the monument of bishop Drokenford on the southern side, and is a facsimile of the bishop's monument, is the contemporary memorial of dean Godley. It would be an appropriate resting-place for the dean, side by side with his bishop, at the entrance of the chapel which the two had been instrumental in building. At any rate, the lady chapel and the chapter-house are the memorials of dean Godley's works. Here it may be said of him, "*Si quæris monumentum, circumspice.*"

2. Wybert de Littleton, elected dean in place of Richard de Bury, had died during installation.

Walter de London succeeded August 30th, 1335. At a chapter meeting in 1337, he reviews the dangers to the church of Wells, on one hand from external assaults, "*concussionibus et oppressionibus plus solito,*" and on the other from the unfinished state of the works upon the church, "*fabrica ejusdem ecclesiæ pro magna parte restauranda.*" Then he cites the precedents, in dean Godley's time, of calling upon the whole body of the chapter to unite in common action to support a common burden, and to provide a remedy for common evils.

The result of that common action had been that the resident canons, who had borne the burden and heat of the day (*pondus diei et æstus*), had spent more than 1,000*l.* in the defence and restoration of the church, "*mille libras et amplius sterlingorum circa defensionem et restaurationem ecclesiæ impenderant.*" But there still remained a debt upon the church of 200*l.* Then he continues, "Whereas it was notorious that the non-resident canons, many of whom held the richer

\* Original documents, 240. The executors named are Hamelin de Godelee, Ricardus de Chudderleigh, Johannes de Chudderleigh, Rogerus de Acton.

The bishop at the same time gave a release in the same terms. *Reg. Radulphi f. 84.* The chapter document is endorsed: "*Duplicata et ideo ista remanebit in scrinio thesaurariæ,*" and in a later hand, "Release to dean Godelee's executors. *Canonisatio dñi Willelmi de Marchia.*"

prebends, had contributed nothing," "ab omni contributione et subsidio pro defensione et restauratione facienda penitus abstinnerunt," the dean now called upon them to bear their part, and to be forward in beautifying the house of God, "ad honorem Dei et celeriolem exornationem ecclesiæ." Then it was ordered in chapter that the debt of 200*l.* should be raised by the taxation of the prebends of all non-resident canons.<sup>a</sup>

Such was the state of the church of Wells at the close of dean Godley's life. So much had been done in his time; (a) Tower, (b) Chapter-house, (c) Lady Chapel, were finished. The parapet round the church, raised upon the semi-Norman corbel table, bears witness by its ball flower in the string course that it is work of this same time. Stall work for the choir prolonged eastward was waiting for the completion of the decorated sanctuary. A wonderful and beautiful series of works, the outgrowth of twenty-five years of architectural genius, and enthusiasm, and labour, the memorial of dean Godley. Much more remained to be done to complete the grand design, and more remains to be told of the progress of the fabric during the vigorous episcopate of Ralph of Shrewsbury, which now lies hid in his register as yet unexplored, and in the chapter documents.

Yet something has been brought to light from these chapter documents to show who were the builders of the church of Wells, and the makers of its constitution in the century since Jocelin of earlier fame. Dean Godley and his master builder, William Joye, names hitherto little known among us, stand side by side with Jocelin and his builders, Adam and Thomas Lock, Thomas Norris, and perhaps Elias of Dyrham, as the builders of the next period of architectural beauty. They, like Jocelin, were the finishers of works prepared for them by the piety, the gifts, the patriotism, and the labours of the men who had preceded them. They too, like Jocelin, have been the authors of new creations of art which have made the church of Wells a "thing of beauty and a joy for ever."

These were the men who

"fashioned for the sense,  
These lofty pillars, spread that branching roof  
Self-poised, and scooped into ten thousand cells,  
Where light and shade repose, where music dwells  
Lingering—and wandering on as loth to die;  
Like thoughts whose very sweetness yieldeth proof  
That they were born for immortality."

<sup>a</sup> R. i. f. 200. 1337, March 31.

II.—*Sword-stands in the churches of the City of London.*

*By E. H. FRESHFIELD, Esq., M.A., F.S.A.*

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Read May 28, 1891.

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UNTIL quite recently it was customary for the Lord Mayor to go on Sundays in state to one or other of the City churches.

On these occasions the Lord Mayor was accompanied by the sheriffs and officials of the Corporation, and escorted by the mace-bearer and sword-bearer, the latter wearing the cap of maintenance, and carrying the state sword. It was usual for the alderman of the ward to be present with any other aldermen that pleased to come, and as many aldermen as came brought with them their ward beadles, carrying the ward maces.

It would appear that towards the latter part of the sixteenth century it became the practice of the Lord Mayor on attending the parish church to have his sword carried before him. It is not clear when this first started, but after the Fire of London and the rebuilding of the City it became the universal custom, and so continued until a comparatively recent period, when the change in the manner of living made it not only inconvenient but an absolute tax upon the officers of the Corporation if the Lord Mayor attended church in state with his sword borne before him.

But for the time that it lasted, that is rather more than two centuries, it necessitated the introduction into the City churches of a convenient stand or case upon which the City sword was placed upon these occasions. The State visits of the Lord Mayor were discontinued in the mayoralty of Sir Robert Fowler, in consequence of complaints from the officials of the Corporation that as they no longer resided in the City, the functions involved their coming up to town and working as hard on the Sunday as on the six days of the week. The consequence is that the sword stands have ceased to have any use. Those stands which have artistic merit will no doubt be preserved, but, judging by what has

already occurred, I foresee that the plain stands, which are quite as interesting as the handsome ones, will in time disappear, and my object in drawing attention to them is to prevent, if possible, any more of them from disappearing.

And first I wish to say something as to the origin of these articles of ecclesiastical furniture, for this is what they eventually became in the City of London. I regret that I cannot say anything very certain.

I think it may be taken as sure that these sword cases or stands were not in use before the reign of Queen Elizabeth. There are many schedules of ecclesiastical furniture in existence prior to that date, but in none of them, as far as I can ascertain, is there any mention of such an article as a sword case, or sheath, or stand, although the list of articles is most minute. The earliest that I know of is mentioned in the *Account Books of St. Michael's Cornhill*, published by Mr. Alfred I. Waterlow. Unfortunately, this publication is only a series of extracts, and I cannot be sure that it is complete.

Under date 1574, that is, in the sixteenth year of Queen Elizabeth's reign, there is the following entry :

Paid for gyllding of the case for my Lord Mayor's swearde . . . . 9s.

This Lord Mayor, Mr. Alderman Hawes, was a resident in the parish, and was Lord Mayor in the year 1574-1575. He had had a new pew made for him just outside the chancel screen a year or two before, on his being appointed alderman of Cornhill ward, and the pew was further fitted with a gilded sword-case on his being made Lord Mayor.

I have said that this is the first instance I have found, and I think it likely that it was the very first, for this reason :

The parish of St. Bartholomew by the Exchange, the books of which are printed, adjoins the parish of St. Michael's Cornhill. Sir John Rivers was a resident in St. Bartholomew parish, and was elected Lord Mayor in 1573-74, the year preceding Sir James Hawes. No sword-case was put up for him, but the church was whitened and coloured at the expense of the parish, in the same way in which it had been done ten years before when Sir John White was Lord Mayor.

The parish of St. Christopher-le-Stocks, the books of which have been printed by my father, also adjoined both St. Bartholomew and St. Michael's Cornhill. In these books there are some entries bearing upon the same subject. In the account books there is from time to time inserted a list of articles belonging to the churchwardens.

In a very complete list dated in the year 1624, there is no entry relating to any sword-case or stand.

In the year 1634 Alderman Sir Thomas Moulson became Lord Mayor. He was a resident in the parish, and in the account book there are the following entries :

Paid to Mr Webb, Upholsterer, for his work done about my Lord Mayor's	}	9	4	0
pewe and my ladies . . . . .				
Pay to Mr Thorp, Carpenter, for his work . . . . .		1	5	10
Paid to the Carver for carving a sword case and two beasts on my Lord	}	2	5	0
Mayor's pew . . . . .				
Paid to the Painter for painting and gilding the sword case . . . . .		2	0	0
To the Gilder for gilding the beasts at my Lord Mayor's pew and coloring	}	13	4	
the doore in the wall . . . . .				

In the next list of goods these articles are duly recorded as follows :

A Lion and Unicorn carved and gilded and sword case for my Lord Mayor.

The existence of these ornaments is also duly recorded in the later lists of ecclesiastical ornaments in the account books.

An examination of other of the lists of church goods has convinced me that prior to the Fire of London a sword-case was not considered an absolute necessity. I have particularly examined the account books of the parish of St. Bartholomew by the Exchange. At the end of each year the churchwarden renders an account of all the church goods in his possession. In none of these is there any notice of a sword-stand, although the accounts are most precise and in other respects exactly similar, *mutatis mutandis*, to the accounts in the adjoining parish of St. Christopher. Yet, as I have said before, in this parish both Sir John White and Sir John Rivers had been mayors.

I am, I think, entitled to generalize from these sets of entries and to make the following deductions :

First. That there were no such ornaments prior to the reign of Queen Elizabeth.

Secondly. That these ornaments were originally set up in some churches when the Lord Mayor resided in the parish.

Thirdly. That they were afterwards treated as part of the parish church furniture.

Fourthly. That they consisted of wooden erections into which the sword was placed when the Lord Mayor attended in church, and that they were placed in front of his pew or close to it.

Fifthly. That on either side of the stand was the lion and the unicorn, "the two beasts" as they are called. Why these beasts were selected instead of the griffins, the supporters of the City arms, I cannot say.

During the Great Rebellion the two beasts in St. Christopher's church were removed, and in the last list before the Fire of London the entry is "a Lord Mayor's sword-case." This last entry in St. Christopher's books bring me to the Fire of London in 1666.

At this time a general sweep was made of the City churches. Of the whole number of one hundred and eight which existed on August 31st in that year, there remained upon September 5th but the following:

St. Botolph Without Aldgate. Since pulled down and rebuilt.	St. Alphege London Wall. Rebuilt.
St. Katherine Coleman. Since pulled down and rebuilt.	St. Giles Without Cripplegate. Intact.
St. Katherine Cree. Rebuilt during Laud's episcopate.	St. Andrew Holborn. Rebuilt.
St. Olave Hart Street. Intact, but restored.	St. Bartholomew the Great. Intact.
All Hallows Barking. Intact, but restored.	St. Bartholomew the Less. Rebuilt.
All Hallows Staining. Destroyed.	St. Dunstan in the West. Rebuilt.
St. Andrew Undershaft. Intact, restored.	St. James Duke's Place. Rebuilt, and destroyed.
St. Helen Bishopsgate. Intact, restored.	St. Dunstan in the East. Rebuilt.
St. Martin Outwich. Destroyed.	St. Ethelburga. Intact.
St. Botolph Bishopsgate. Rebuilt.	St. Sepulchre. Rebuilt.
All Hallows in London Wall. Rebuilt.	St. Peter le Poer, and St. Botolph Without Aldersgate.

Now among the whole of them there is only one sword-stand which I can with certainty attribute to a period anterior to the Fire of London, and it is in the church of St. Helen Bishopsgate. It bears the arms of the alderman who was Lord Mayor in 1664, that is, two years before the Fire. This sword-stand is of wood, and is of a shape quite different from all the others now existing in the City. (*See Plate I.*) It is unfortunately not in its original place, and I am not quite certain that it did not belong to St. Martin's Outwich.

It so happens that the next in point of date is the sword-case in the church of St. Mary Aldermary. It is well known that this church for some reason, probably because it was not surrounded with houses, suffered very little at the Fire of



London, and is now substantially as it stood before the Fire. It is just possible that the sword-case in this church is like the earliest type. At all events, it is of wood, and bears the date 1682. Of the churches in the City to-day, thirty have one sword-stand each; nine have two sword-stands each; two have three sword-stands; and two others have four sword-stands. Two stands are in Haberdashers' Hall, from demolished churches. One stand is in Vintners' Hall, and one in Mercers' Chapel. St. Paul's cathedral church and St. Mary Woolnoth have only a small bracket or cup and a ring fixed on the wall to hold the sword, and fifteen churches have no stand at all.

It will be seen that several churches have more than one stand, but there is only one instance, and that in St. Dunstan in the East, of a church having two stands exactly alike in design and detail and apparently made as a pair. In most cases the additional stands have been inherited from neighbouring churches which have been pulled down, and whose parishes have been united under one mother church; for instance, St. Margaret Lothbury inherited a sword-stand from St. Olave Old Jewry, and St. Olave Hart Street inherited two stands from Allhallows Staining. In the case of some churches the additional stands must have been presented by the parish, or else by the alderman of the ward on his becoming Lord Mayor. This must have been the case in St. Mary at Hill, which has four stands, and in All Hallows Barking, which has three stands, for both are the churches of a single parish. In a foot note on page 105 of Mr. Joseph Maskell's book on All Hallows Barking, published in 1864, I find the following information:

There are over the Corporation pew of this parish three elegant sword-rests, in memory of as many Lord Mayors inhabitants of the parish during their year of office. . . . The central of the three sword-bearers was erected to commemorate the mayoralty of Slingsby Bethell in 1755. This is confirmed by the Vestry Minutes of 23rd October, 1755. Ordered, that it be left to the churchwardens to alter the Corporation pew in the church for the reception of Slingsby Bethell, esquire, Lord Mayor elect, in the same manner as it was done in the mayoralty of Sir John Eyles, and to provide a handsome sword-iron, with proper arms and decorations. The sword-rest in the north side was erected pursuant to an order of vestry to commemorate the mayoralty of another parishioner, Sir Thomas Chitty, in 1760. In the London Directory of 1738, Bethell is described as merchant of Tower Hill, and Chitty as grocer opposite the Custom House.

Fifty-eight of the sixty-three stands are made of wrought iron, two are made of brass, and three are made of wood. Two of the wooden stands are, as I have already said, considerably older than the iron and brass stands.

I have shown that in the old parish accounts the sword-stands are called "cases." The only stands now in existence to which the name of case could be

applied are the wooden stands in St. Mary Aldermary and in Vintners' Hall. The former is dated 1682. It has been drawn in the *Transactions of the London and Middlesex Archaeological Society*.<sup>a</sup> The sexton of the church referred to it as the "scabbard," and on the whole, perhaps, this is the most appropriate name. The scabbard springs from between the wings of a cherub, whose head forms the base; the sides are ornamented with carving to represent leaves and fruit; on the top is a shield with the royal arms and two flying cherubs as supporters. The handle of the sword rested on the head of the cherub, and was held in a vertical position by a ring two-thirds of the way up the scabbard; the ring is concealed by a diminutive shield bearing the City arms; below the shield in the fruit and flowers on each side are two shields, with the City arms and initials, and a band or scroll with the date. The stand is fixed against the third pier on the south side of the nave.

The case in Vintners' Hall is a flat object, in shape like a guitar, prettily carved with vine leaves and fruit. There is one shield with the arms of the Vintners' Company, but no date. It may have come from St. Martin's in the Vintry.

The third wooden stand is in St. Helen's Bishopsgate; it is of a totally different design, and I should describe it as a small baldacchino. (Plate I.) It rests on a stone bracket let into a pier on the south side of the chancel. Two twisted columns support a heavy canopy, on which stand two angels holding a shield with the royal arms. The second shield immediately below it bears the arms of Sir John Lawrence, Lord Mayor, 1664; that is two years before the date of the great fire. There is a third shield with the City arms. The handle of the sword rested on the pedestal between the two pillars, and the point was fixed into a hole in the centre of the canopy.

Before describing the fifty-eight iron stands in detail, I should like to say a word or two about them. I should think the origin of the number is, that after the conclusion of the ironwork in St. Paul's there was a sort of whip made to induce the parishes to employ the ironworkers, and that these sword-stands are probably all of the same date and made by the ironworkers who worked at St. Paul's. Probably the date on the stand in St. Swithin's, 1710, fixes approximately the date of all.

It was not unusual for general orders to be sent to the parishes to buy certain things, particularly books. In this way Anthony Munday's edition of *Stowe's Survey* was largely bought by the parishes.

<sup>a</sup> I. 267.





WOODEN SWORD-STAND.—ST. HELEN, BISHOPSGATE.



The ironworkers probably gave the parishes good or poor work according to the wealth or poverty of the parish. There is evidence to show that some of the stands were designed under the influence of French ironworkers or designers. Part of the design of the very handsome stand in St. Lawrence Jewry is a curious object, which I at first took to be a conventional representation of the City purse. It looks like a net or bag with three tassels hanging from it. What it is really intended to represent I do not know, but the same object will be found on the iron railings which shut off the apse of St. Paul's from the quire aisles, and it will also be found on the iron railings round the eastern part of the quire of Amiens cathedral church.

All the stands are about the same height, that is, between 5 and 6 feet; they all have a cup and ring, and the handle of the sword rested on the cup, which is generally in the form of a shell, and the blade passed through the ring, so that the sword rested in a vertical position. All the stands have a crown on the top of them and one or more coats of arms, in which appear the royal and city and one or more private coats of arms. If the alderman of the ward happened to become Lord Mayor, these were added to the stand, so that as a rule the private arms are those of a Lord Mayor who was the alderman of the ward in which the parish is situated. The parishes of some wards, as for instance St. Margaret Lothbury, never had a Lord Mayor, and so the stand remained with only one shield with the City arms.

There are two distinct principles on which the iron sword-stands have been made, the pole design and the frame design.

The pole design I propose to divide into three series or groups, A, B, and C.

Series A has examples in:

St. Margaret Pattens,  
St. George Botolph Lane,  
Haberdashers' Hall,  
St. Bride,  
St. Bartholomew the Great.

In each example the stand is an iron stanchion about 5 feet 6 inches high with a gilt crown on the top. At the base of the stand is a cup to hold the handle of the sword, and two-thirds of the way up the rod is a ring, which is concealed behind a small shield with the City arms.

The stand in St. Margaret Pattens and the small stand in St. George Botolph Lane are typical of the series. The stand in Haberdashers' Hall is similar, but the two shields, with the City and royal arms, are fixed to the end of short arms

instead of being fixed on the pole. The stand is now placed against the wall behind the master's chair in the hall of the Haberdashers' Company.

The stand in St. Bride is like those in St. Margaret Pattens and St. George. It has one shield, with the City arms supported by two grotesque griffins rampant, standing on short arms fixed at right angles to the pole at its centre.

The stand in St. Bartholomew the Great is a plain iron rod with two shields, in one the City arms, and in the other the arms of the alderman of the ward.

Series B has examples in:

St. James Garlickhithe (south of nave),  
St. Andrew by the Wardrobe,  
All Hallows Lombard Street,  
St. Mildred Bread Street,  
St. Michael Paternoster Royal,

all of the same pattern.

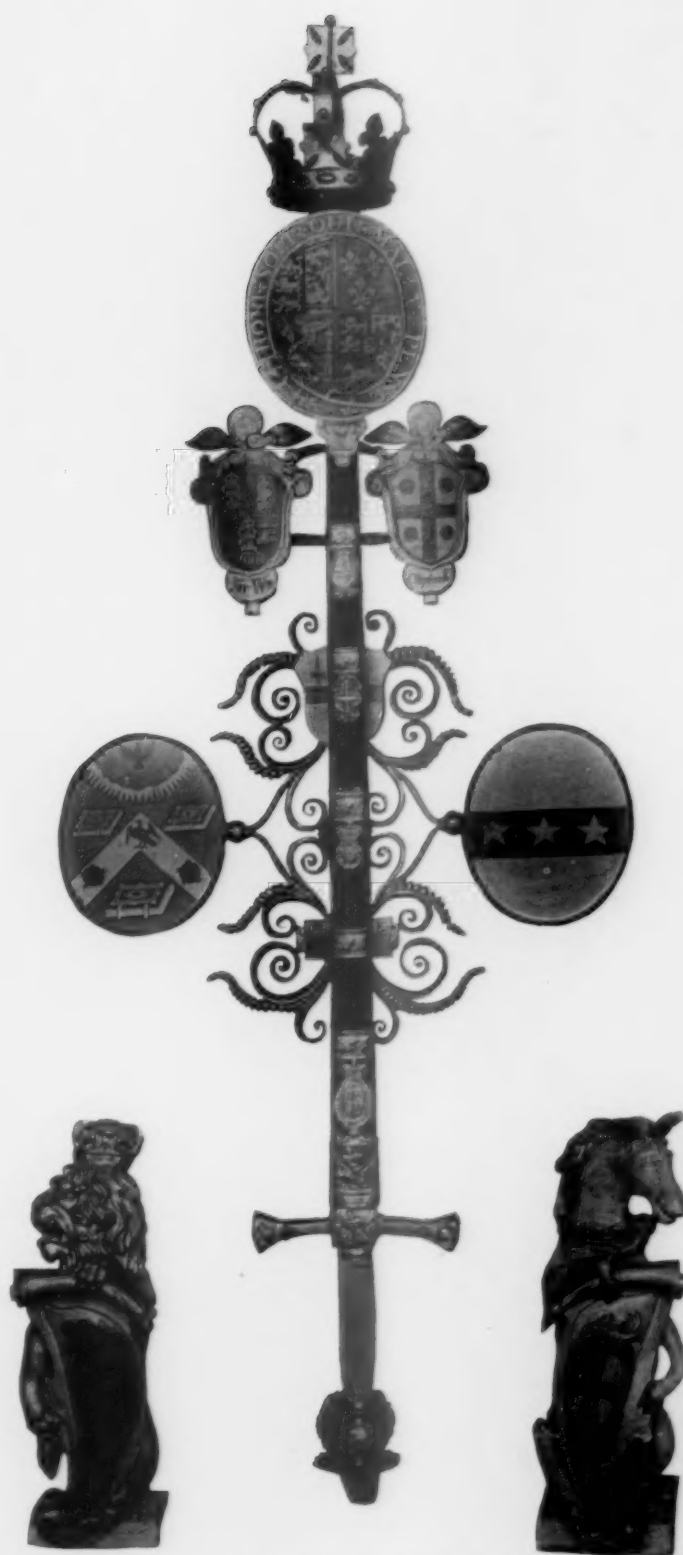
Mercers' Chapel,  
St. Stephen Coleman Street,  
St. Olave Old Jewry,  
St. Botolph Aldgate,  
All Hallows Lombard Street,  
St. Margaret Lothbury.

In each case the pole is divided into two equal lengths joined at the centre by a boss. Above and below the boss the pattern of the scroll-work is the same, and is intended to represent two conventional roses or heartsease. The first five stands have but one shield with the City arms.

The stand in Mercers' Chapel has three shields, one under the crown with the royal arms and two fixed to the scroll work at the centre with the City arms and the arms of the Mercers' Company.

The stand in St. Stephen's Coleman Street has two shields fixed to the scroll work at the centre, with the City arms in one shield and those of Warren Stormes Hale, tallow chandler, alderman of Coleman Street Ward, Lord Mayor in 1864, in the other.

The stand of St. Olave Old Jewry, now in St. Margaret's Lothbury, has six shields. The first shield under the crown bears the royal arms. Just above the centre boss, in a small shield, are the City arms, and on cross arms at the centre are two large shields, the one with the arms of John Boydel, stationer, alderman of Cheap Ward, Lord Mayor in 1790, and the other with the arms of the Stationers' Company. On the upper cross arms, under the royal shield, are two smaller shields, the one with the arms of Sir William Clayton, knight, and the other with



SWORD-STAND.—ST. OLAVE, JEWRY.  
*With Old Bailey Sword, and Lion and Unicorn.*



SWORD-STAND.—ST. MARGARET, LOTHBURY.  
*With Pearl Sword and Lion and Unicorn.*

the arms of the Drapers' Company. Sir William Clayton was not a Lord Mayor himself, but a member of his family, Sir Robert Clayton, was alderman of the Cheap Ward and Lord Mayor in 1679, and also a member of the Drapers' Company. The names of both Boydell and Clayton appear in the scrolls on the stand. This stand is figured on Plate II., with the Old Bailey sword in it.

The stand in St. Botolph Aldgate has the shields arranged in a similar manner. The shields with the royal and City arms are in the same positions under the crown and over the centre boss respectively. On the upper cross arms are two shields, the one with the arms of James Shaw, scrivener, alderman of Portsoken Ward, Lord Mayor in 1805, and the other bears the arms of the Scriveners' Company. The lower cross arms have two shields, in the one the arms of Thomas Johnson, cooper, alderman of Portsoken Ward, Lord Mayor in 1840, and in the other shield the arms of the Coopers' Company.

The larger stand in All Hallows Lombard Street is on the same principle as the last two, though the scroll-work appears, as it were, incidentally, and not as the principal part of the design. The stand has three extended cross-arms with shields at the extremities. There are two other shields, one at the base and the other under the crown; the latter bears the royal arms. On the first upper bar there are two shields, in one a mitre, and in the other the City arms with a date 1802. On the second bar there are two shields, in one the arms of Sir John Eamer, salter, alderman of Langbourn Ward, Lord Mayor in 1801; and in the other the arms of Sir John William Anderson, glover, alderman of Aldersgate Ward, M.P. for the City, Lord Mayor in 1797. On the third bar there are two shields, in one a figure which I take to be the conventional representation of Justice blindfold, and in the other the arms of Sir Brook Watson, musician, alderman of Cordwainer Ward, Lord Mayor in 1796. At the base of the standard are the arms of Sir John Key, stationer, alderman of Langbourn Ward and Bridge Ward, Lord Mayor in 1831.

The stand in St. Margaret's Lothbury belongs to this series, but the scroll-work is larger than usual. It is illustrated on Plate III. with the Pearl Sword, and with the two beasts. We never had an alderman in the parish who was Lord Mayor, and so there is only one shield with the City arms under the crown. The design of this stand may be compared with that of the ornament on the lamp chain in the north chapel of St. Paul's and in the parish church at Reigate, Surrey.

Series C has examples in

St. Anne and St. Agnes,  
St. James Garlickhithe,  
St. Mary Magdalen Knightrider Street,  
St. Giles Cripplegate.



For these the rose or heartease of Series B is replaced by a simple scroll at the base of the pole.

The stand in St. Anne and St. Agnes is very simple; it has a scroll at the base and one small shield with the City arms.

The stand in St. James Garlickhithe, on the north side of the church, is on the same principle, but the scroll is much larger. There is one shield with the City arms; also the arms of John Moore, grocer, alderman of Walbrook Ward, Lord Mayor in 1681; and those of J. Hooper, vintner, alderman of Queenhithe Ward, Lord Mayor in 1847. This stand was inherited from St. Michael Queenhithe.

St. Mary Magdalen Knightrider Street was destroyed by fire in 1889, and all but a fragment of the stand was destroyed also. But enough was left for a restoration to be made, and the restored stand will be put in St. Martin Ludgate, the church of St. Mary's parish. The stand has one shield with the City arms.

The stand in St. Giles Cripplegate is of the same design elaborated. It has been removed from the partition of the pew and screwed on to a modern wrought-iron base made to carry out the design of the upper portion, and is fixed on to the floor of the church. The modern base is very well made, and the stand is one of the most handsome and effective in the City. Unfortunately the prettiest part of it is covered by gaudy coats of arms painted on tin shields. There are five shields: one shield with the City arms under the crown, and four large shields with the arms of Sir William Staines, carpenter, alderman of Cripplegate Ward, Lord Mayor in 1800; of Sir Matthew Wood, fishmonger, of the same ward, Lord Mayor twice, 1815 and 1816; of Thomas Challis, butcher, of the same ward, Lord Mayor in 1852; and of Sir H. E. Knight, spectacle-maker, at present alderman of the same ward, Lord Mayor in 1882.

The rest do not admit of classification. They are in

Christ Church Newgate Street,  
St. Andrew Holborn, .  
St. Mary-le-Bow,  
St. Clement Eastcheap,  
St. Mary Abchurch,  
St. Benet Paul's Wharf.

The stands in Christ Church Newgate Street and in St. Andrew Holborn both stand on brackets fixed to a pillar of the church. The stand in St. Andrew's is fixed on a pivot and revolves; it has one small shield with the City arms. The stand in Christ Church Newgate Street is more elaborate, and the pole is broken at the centre in two equal lengths by an open and diamond-shaped ornament. There is one shield under the crown with the arms of the



City and those of Sir Benjamin Phillips, spectacle-maker, alderman of Farringdon Without Ward, Lord Mayor in 1865.

The stands in St. Mary-le-Bow and in St. Clement Eastcheap are in the form of a cross; the scroll work between the arms and the upright is in both stands the same.

The stand in St. Mary-le-Bow is a square rod with cross piece. There is a pretty sunflower at the centre, where the arms join the uprights, and the ends of the cross arms are ornamented with sunflower buds. There is one shield with the City arms.

The stand in St. Clement Eastcheap is a round pole, and the scroll work is of the same pattern. There are two shields on the pole, the upper one with the City arms, the lower one immediately below with the arms of Thomas Dakin, spectacle-maker, alderman of Candlewick Ward, Lord Mayor in 1870. Part of the scroll work is concealed by the lower shield and by pieces of flat tin cut and painted to represent the pearl sword and mace and the cap of maintenance. I purposely call these objects flat pieces of tin to distinguish them from those stands which have models of the sword and mace. There are six stands with the sword and mace represented, and it is to be noticed that they are in adjoining parishes.

The two stands in St. Mary Abchurch are almost but not quite a pair. The first stand has two shields, the one with the arms of George Scholey, distiller, alderman of Dowgate Ward, Lord Mayor in 1812; and the upper shield with the City arms. The second stand has four shields with the royal arms, the City arms, and the arms of Samuel Birch, cook, alderman of Candlewick Ward, Lord Mayor in 1814; and the fourth shield bears the arms of the Cooks' Company. Both stands have flat pieces of tin cut and painted to represent the sword and mace and the cap of maintenance.

The stand in St. Benet Paul's Wharf, now the Welsh Church, is a simple iron rod with one shield bearing the City arms under the crown. The rod is prettily ornamented with small scrolls.

I now come to the frame design, which may be divided into two series, D and E.

Series D has examples in

Haberdashers' Hall,

St. Olave Hart Street (nave, north side),

St. Nicholas Cole Abbey.

They are alike in rectangular design but have no flowers or foliage.

St. Botolph Bishopsgate,  
 St. Helen Bishopsgate,  
 All Hallows Barking (middle stand),  
 St. Dunstan in the West,  
 All Hallows Barking (north stand).

They are also rectangular, but relieved with flowers and foliage, daisies and mistletoe.

St. Olave Hart Street (nave, south side),  
 St. Margaret Pattens,  
 All Hallows Barking (south side).

They are all alike in design and detail, but different in proportion.

St. Swithin London Stone,  
 St. Mary at Hill.

They are the same in design and detail, but different in proportion.

St. George Botolph Lane,  
 St. Mary at Hill.

Both in memory of Beckford.

The stand at Haberdashers' Hall is the typical example of the series. It is kept by the clerk of the Company, and is the second stand the Company possesses. There is one shield with the City arms.

The stand in St. Olave Hart Street, on the north side of the nave, is on the same principle, but with four shields. The upper shields have respectively the royal and the City arms; the third shield has arms which I cannot identify; and the fourth shield the arms of the Vintners' Company.

The stand in St. Nicholas Cole Abbey is different in design but on the same principle. It has four shields. The top shield bears the royal arms, the second shield the City arms and the arms of the Grocers' Company, the third bears the arms of Sir Robert Ladbroke, grocer, alderman of Castle Baynard Ward, Lord Mayor in 1747, and the arms of the fourth shield I am unable to identify. They seem to be purely fanciful.

The stands in St. Botolph, St. Helen Bishopsgate, All Hallows Barking, and St. Dunstan in the West, are all alike in design and detail, but different in proportion. Each stand has four shields. The first and second shields bear the royal and City arms respectively, and the third and fourth shields private arms. The third and fourth shields in the stand in St. Botolph, Bishopsgate, bear the arms of William Taylor Copeland, goldsmith, alderman of





IRON SWORD-STAND.—ST. HELEN, BISHOPSGATE.

Bishopsgate Ward, Lord Mayor in 1835, quartered with the arms of the Yates family. The arms in the fourth shield I have been unable to identify.

The stand in St. Helen Bishopsgate (Plate IV.) has in the third shield the arms of John Thomas Thorpe, draper, alderman of Aldgate Ward, Lord Mayor in 1820, and in the fourth shield the arms of the Drapers' Company. This Lord Mayor's arms also appear on one of the two stands in St. Katharine Cree. The reverse of the upper shields bear the initials of Dr. J. E. Cox (the vicar), and churchwardens in office (Mr. Thomas Rolfe and Mr. George Richardson), when the church was restored in 1868 and on the reverse of the lower shields the words "restored 1868" and a figure of St. Helen, the initials R. B. being those of Robert Barton, churchwarden, successor to G. Richardson.

The middle stand in All Hallows Barking in the third shield bears the arms of Slingsby Bethell, fishmonger, alderman of Walbrook Ward, Lord Mayor in 1755, and M.P. for the City, and in the fourth the arms of the Fishmongers' Company.

The stand in St. Dunstan in the West has in the upper shield the royal arms, in the second shield the letter "W," in the third and fourth shields the letters "S" and "D" and the date 1745. Sir R. Hoare, goldsmith, was alderman of the Farringdon Without Ward in that year.

The northernmost of the stands in All Hallows Barking is an elaboration of the design of the preceding four, and is by far the handsomest piece of iron work in sword-stands in the City. The two upper shields bear the royal and City arms, and the third shield the arms of Sir Thomas Chitty, salter, alderman of Tower Ward, Lord Mayor in 1759.

The stands in St. Olave Hart Street, St. Margaret Pattens, and in All Hallows Barking, are all of the same design. Each has four shields. The two upper in each bear the royal and City arms, and the third and fourth private arms.

The stand in St. Olave Hart Street (south side of nave) bears the arms of Daniel Lambert, vintner, alderman of Tower Ward, Lord Mayor in 1741, and of Robert Willimott, cooper, alderman of Lime Street Ward, Lord Mayor in 1742; and in the fourth shield the arms of the Vintners' Company.

The larger stand in St. Margaret Pattens in the third shield bears the arms of Sir Peter Delmé, fishmonger, alderman of Billingsgate and Bridge Wards, Lord Mayor in 1723; and in the fourth shield the arms of the Fishmongers' Company.

The southernmost stand in All Hallows Barking in the third shield bears the arms of Sir John Eyles, haberdasher, alderman of Vintry Ward, Lord Mayor

1726 to 1727; and in the fourth shield the arms of the Haberdashers' Company.

The stands in St. Swithin London Stone and St. Mary at Hill are almost a pair. The stand in St. Swithin's has two shields, and under the crown are a medallion, the initials A. R. and the date 1710. Sir Gilbert Heathcote was Lord Mayor in that year. He was alderman of Walbrook Ward, and lived in St. Swithin's Lane, in the parish. The date on this stand, as I believe, marks approximately the date of all the stands. The small stand in St. Mary at Hill (nave, south) has one shield in the centre with the royal arms. These stands are like the stand illustrated on Plate V., and referred to later on.

The stands in St. George Botolph Lane and in St. Mary at Hill in memory of William Beckford are almost exactly of the same design. Each has four shields, with the royal arms, the City arms, and the arms of W. Beckford, ironmonger, alderman of Billingsgate Ward, Lord Mayor twice, in 1762 and 1770, as the inscription on the stand in St. Mary in the Hill records. The inscription in St. George Botolph Lane runs, "Sacred to the memory of that real Patriot, the Right Honble. W. Beckford, twice Lord Mayor of London, whose incessant spirited efforts to serve his country hastened his dissolution on the 21st June, 1770, in the time of his Mayoralty, and in the 62nd year of his age." The fourth shield on each stand bears the arms of the Ironmongers' Company. Both stands have models of the sword and mace, and of the cap of maintenance.

In Series E there are eight examples in

St. Katherine Cree (2),  
St. Olave Hart Street,  
St. Lawrence Jewry,  
St. Andrew Undershaft (quire).

They are all of the same design, and are like the stand illustrated on Plate VI., and referred to later on.

St. Magnus,  
All Hallows the Great,  
St. Edmund King and Martyr.

These last three are different from the first five, and from one another, but the general principle is the same, and so I have grouped them together.

Both the stands in St. Katherine Cree have five shields. The two upper shields in each bear the royal and City arms. The shields in the stand on the south side bear the arms of I. T. Thorpe, Lord Mayor in 1820, whose arms also appear on the iron stand in St. Helen Bishopsgate, and the arms of the Drapers'

Company. The shields on the stand on the north side bear (third shield) the arms of Harvey Christian Coombe, fishmonger, alderman of Aldgate Ward, Lord Mayor in 1799, and (fourth shield) the arms of John Burnell Glover, alderman of Aldgate Ward, Lord Mayor in 1787. The fifth shield in both stands bears the arms of Sir A. Lusk, the present alderman of the ward and Lord Mayor in 1873. The stand in St. Olave Hart Street, on the north side of the chancel, is of the same design as the last, but less ornate and of smaller proportions. It has four shields, the two upper with the royal and City arms, and two others with respectively the arms of Sir William Plomer, bricklayer and tyler, alderman of Bassishaw Ward, Lord Mayor in 1781, and the arms of the Bricklayers' and Tylers' Company. The stand in St. Andrew Undershaft is like it, and has the arms of G. Bridges, wheelwright, alderman of Lime Street Ward, Lord Mayor in 1819.

The stand in St. Lawrence Jewry is of the same design, but larger in proportion, and has no shields. In place of shields there is an object intended, apparently, to represent a net purse or bag with three tassels. To this I have already referred.

The stand in All Hallows the Great has four shields. That under the crown bears the royal arms, and the arrangement of the three others is somewhat similar to that in the preceding examples of the series. The shields bear the City arms and the arms of Sir William Calvert, brewer, alderman of Portsoken Ward, Lord Mayor in 1748, and the arms of the Brewers' Company. There are great pieces of tin cut and painted to represent the Sunday sword, the mace, and the cap of maintenance, but they are later additions. This stand is now in St. Michael Royal.

The stand in St. Magnus is of the same shape, but smaller. It has seven shields, the royal arms, the City arms, and the arms of John Garratt, goldsmith, alderman of Bridge Within Ward, Lord Mayor in 1824, and the arms of the Goldsmiths' Company; those of Sir James Sandeman, draper, alderman of the Bridge Within Ward, Lord Mayor in 1792; the arms of the Drapers' Company; and those of Sir William Stephenson, grocer, alderman of Bridge Within Ward, Lord Mayor in 1764. Under the royal arms is the date 1825, during part of which year J. Garratt was Lord Mayor. The stand in St. Edmund King and Martyr has three shields. In the lower shields are the arms of the City and of the Salters' Company, and in the principal shield the arms of Sir Richard Glynn, salter, alderman of Dowgate Ward, Lord Mayor in 1758. Also the arms of Paul le Mesurier, goldsmith, alderman of Dowgate Ward, Lord Mayor in 1793.

The remaining stands do not admit of classification together. Three belong



to the frame design, and of them two are in St. Mary at Hill and one in St. Peter le Poer. The rest belong to the pole design in the churches of

St. Botolph Aldersgate,

St. Michael Cornhill,

St. Olave Hart Street,

St. Sepulchre,

St. Peter Cornhill,

St. Dunstan in the East.

The stand in St. Mary at Hill, on the north side of the church and next to Beckford's stand, is a plain iron frame supporting five shields in the shape of medallions. The small shield under the crown bears the royal arms, and of the lower shields the upper one bears the City arms, and the others bear respectively the arms of Sir Thomas Sainsbury, bowyer, alderman of Bishopsgate Ward, Lord Mayor in 1786; the arms of Sir William Leighton, fishmonger, alderman of Billingsgate Ward, Lord Mayor in 1807; and the arms of Anthony Brown, fishmonger, alderman of Billingsgate Ward, Lord Mayor in 1827. The names of these Lords Mayor and the dates of their mayoralties appear on the shields.

The stand in St. Mary at Hill, on the south side of the church, is the most elaborate stand in the City. The frame is designed to represent the handle, the hilt, and the blade of the sword. There are four shields. The uppermost rests on the point of the sword and bears the royal arms. Two shields rest on the hilt of the sword, and bear respectively the arms of Thomas Sydney, Lord Mayor in 1854, and the arms of the Girdlers' Company. The handle of the sword rests on a diminutive cap of maintenance, which forms the cup for the handle of the state sword. The cap rests on a shield with the City arms, supported by two brass griffins and scroll-work. The shields are painted on porcelain.

The stand in St. Peter le Poer has three shields with the royal arms, the City arms, and those of Sir John Musgrave, clothworker, alderman of Broad Street Ward, Lord Mayor in 1850. The lower portion of the stand is an addition.

The stand in St. Botolph Aldersgate is of brass, and is one of the most remarkable of the collection; it appears to me to have been intended for some purpose other than a sword-stand. It is now standing on a little wooden pedestal or table. The stand itself is not long enough to hold the sword, and the ring is fixed to the end of an arm or bracket rising five inches above the crown. The cap is in the form of a candle sconce, and it would seem to have been lowered so as to make the space between it and the ring longer. There is one shield with the arms of Sir Joseph Renals, the present alderman of Aldersgate Ward, who has

not yet passed the chair, in one medallion, and the arms of the City in the other. I was informed that it was the custom in this church for each succeeding alderman to paint his arms up over those of his predecessor.

The stand in St. Michael Cornhill is also of brass, and quite modern, made to match the twisted gas standards in the church.

The stand in St. Olave Hart Street, on the south side of the chancel, is one of the prettiest of the collection. There are four shields, one shield under the crown with the royal arms, and four other small shields at the extremity of arms. These are arranged in the same manner as the flowers on the large stand in All Hallows church. In the two upper shields appear the arms of the City and the arms of Sir Charles Peers, salter, alderman of Tower Ward, Lord Mayor in 1715, and in the two lower shields the arms of the Salters' Company, and the date 1715.

The stand in St. Sepulchre is an old stand made in the form of a cross. There are three shields with the City arms, and those of Sir Polydore de Keyser, spectacle-maker, Lord Mayor in 1887.

The stand in St. Peter upon Cornhill is a plain iron rod, with a cup prettily worked to represent a shell. At the top of the rod there is a little brass model to represent the City arms with supporters. It is the only stand which has not got the crown at the top. The ring is concealed behind the model.

The stands in St. Dunstan in the East are a pair. They look like a section of the Eiffel Tower in Paris.

This, I believe, completes the list of the sword-stands in churches, but before concluding I must say a word or two about the pretty iron hat-stands which often accompany the sword-stands. The six churches in which they are to be found are :

- St. Michael Royal,
- St. Andrew by the Wardrobe,
- All Hallows Lombard Street (2),
- St. Olave Hart Street (2),
- St. Andrew Holborn (2),
- St. James Garlickhithe (4).

The stands in St. Olave Hart Street are in the organ loft. One of them is a very pretty object, with two large sunflowers. The pair of stands in All Hallows Lombard Street are about 2 feet 6 inches high, in the form of a cross; the pegs are at the extremities of the arms of the cross. The stand in St. Andrew by the Wardrobe is in the shape of a double letter T. The pegs are at the extremities of the four arms, and on the upright where the arms join it. The sword-stand in St. Magnus is of the same shape, and there are pegs on the upper part of it. It

is not unlikely that it was a hat-peg converted into a sword-stand. The pair of stands in St. Andrew Holborn are 2 feet high; they are wrought iron ornaments, with scroll pattern, and surmounted with Maltese crosses. The stand in St. Michael Royal is extremely handsome; it will be found figured in Mr. Niven's book on the City Churches. There are two stands in St. James Garlickhithe, both 2 feet high; the one has a plain spiral ornament, and the other a representation of St. James, in pilgrim's dress, with a staff in the left hand, and in the other hand a bunch of garlic. There are also in this church a pair of curtain rails, prettily ornamented with flowers and scroll-work.

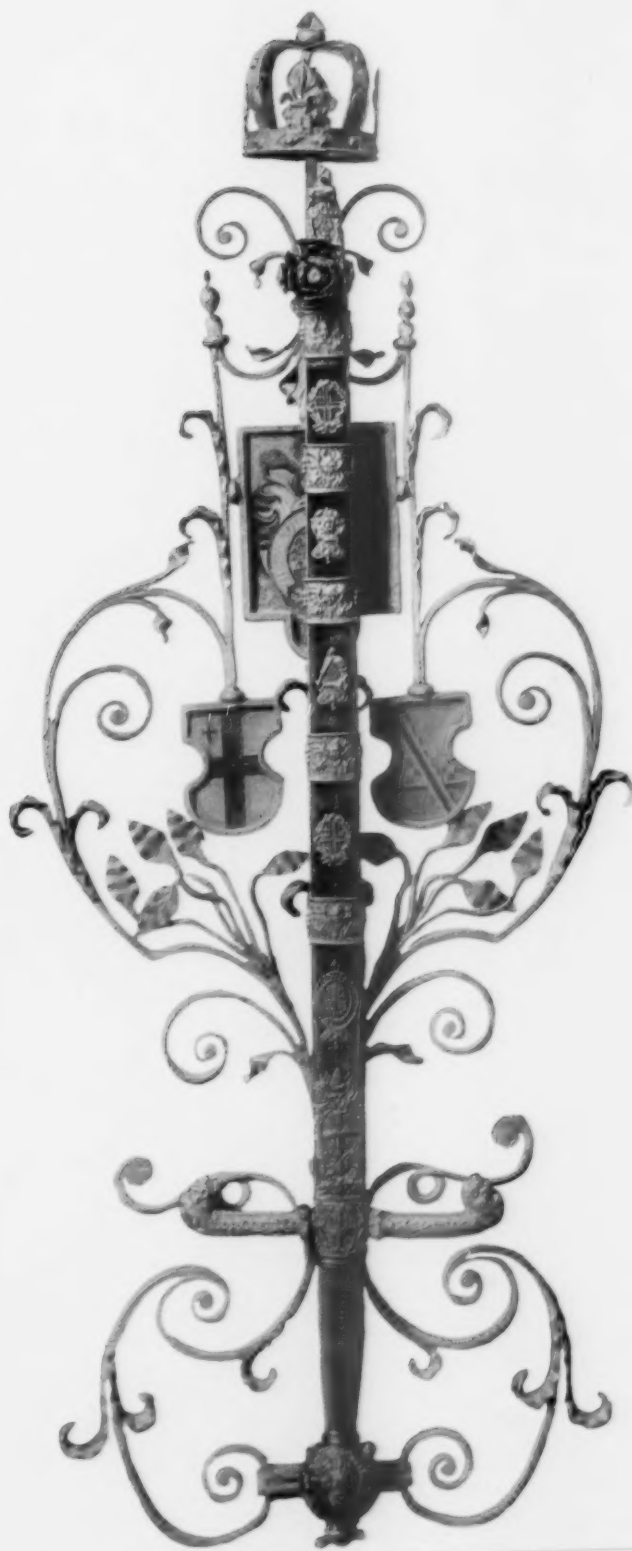
While I am on the subject of ironwork in the City, I must say a word about the gates in the quire and apse of St. Paul's, in connexion with the stands. I think it is pretty clear that the designers of the gates also designed some of the stands, particularly the second group of Series D, for there is a very marked resemblance in the scroll-work and in the foliage and mistletoe ornament. The design of the hat-stand in St. Michael Royal is also very similar to that of the gates, and in the centre of the former a stalk and berry of the mistletoe produces the letter T in running hand. This is obviously intentional, and may be the initial letter of the designer's name. Of smaller ironwork a very pretty example will be found in the bracket for hanging the font cover at St. Mary at Hill.

#### POSTSCRIPT.

Since this was written the writer has become possessed of three sword-stands. Two were found in an ironmonger's shop and both belonged to All Hallows Staining. Properly speaking they should have gone to St. Olave Hart Street, but as there are already four sword-stands in that church, they were presented, the one to the neighbouring church of St. Andrew Undershaft, and the other to All Hallows on London Wall. The first belongs to series D, and is like the stand in St. Swithin London Stone; it has three shields with the Royal and the City arms and the arms of W. Stewart, barber surgeon, alderman of Cripplegate Ward, Lord Mayor in 1721, and is illustrated on Plate V. with the Sunday Sword.

The second stand belongs to series E, and is like the stand on the north side of St. Olave Hart Street. It has two shields with the City arms and the arms of Thomas Rawlinson, grocer, alderman of Broad Street Ward, Lord Mayor in 1753. It is illustrated on Plate VI. with the Mourning Sword.

The third stand belonged to St. Mildred in the Poultry. It is a poor affair, and belongs to series B. It is now in the vestry of St. Margaret Lothbury, the church of St. Mildred's parish.



SWORD-STAND.—ST. ANDREW UNDERSHAFT.  
*With Sunday Sword.*





SWORD-STAND.—ALLHALLOWS ON THE WALL.  
*With Mourning Sword.*





III.—*Notice of the Life and Works of Lucas D'Heere, Poet and Painter of Ghent, with reference to an anonymous Portrait of a Lady in the possession of the Duke of St. Alban's and to the Portrait of Queen Mary of England in the possession of the Society of Antiquaries. By LIONEL CUST, Esq., F.S.A.*

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Read March 10, 1892.

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THE fact that the Society of Antiquaries possesses one of the most important and the earliest dated of the portraits ascribed to the hand of Lucas D'Heere, the poet-painter of Ghent, may cause the Fellows of the Society to take some interest in the life and works of this artist.

Lucas D'Heere is not one of those painters whose life has fallen into oblivion through want of biographers. Carel van Mander, who in 1604 published his precious collection of biographies of Flemish, Dutch, and German painters, was actually a pupil of D'Heere, and included a full notice of his master's life in his series, which, from the intimate connection between the two painters, may fairly be accepted as authoritative. Further his biographies are avowedly based on a similar collection made by Lucas D'Heere himself.\*

Though the name of D'Heere was not forgotten, and his fame as a painter and as a poet was preserved by Van Mander's book and others derived immediately from it, his works have mostly perished or fallen into neglect and oblivion. Even in his native town of Ghent he is little known, save as the author of a few scarce books of poetry, and a picture of indifferent merit in the cathedral church of St. Bavon. His name does not occur in the catalogue of any important public

\* See Carel van Mander, *Le Livre des Peintres; Vie des Peintres flamands, hollandais et allemands* (1604). *Traduction, Notes, et Commentaires, par Henri Hymans* . . . 2 vols. 4to. Paris, 1884.

gallery. In 1852 a native of Ghent, Philips Blommaert, did much to revive an interest in Lucas D'Heere, by a valuable paper contributed to the *Annales de la Société Royale des Beaux Arts et de Litterature de Gand*.<sup>a</sup> A more recent archivist at Ghent, the late M. Edmond de Busscher, made further important contributions to the history of Lucas D'Heere, chiefly derived from original documents;<sup>b</sup> and he also contributed a biography of D'Heere to the new *Dictionnaire de Biographie Nationale de la Belgique*.

From these authorities the life and works of Lucas D'Heere can be traced with a fair amount of certainty. But on one subject they all teach us very little, namely the events which occurred during his visits to England and the works executed by him there. Up to the time of the great exhibition at Manchester in 1857 the important series of portraits ascribed to his hand in England appears to have remained unknown, even to his biographers in Ghent.

The burgher-city of Ghent had, like other great towns in the Netherlands, a school of painters of its own and an artists' guild of St. Luke, since painting was regarded as important a trade as any other, and one requiring equal protection from its mother town. The painters of Ghent, however, do not occupy nearly so important a place in the history of art as those of the neighbouring city of Bruges. It may be worth noticing that in the case of these two cities, which lie so near together, the superior and more liberal trading advantages of Bruges appear to have been instrumental in creating a school of painters, whose works remain to this day among the most prized ornaments of Christendom, whereas Ghent could produce little more than a continuous series of local artisan-artists, of indifferent merit and hardly any originality.

Lucas D'Heere was born at Ghent in 1534, the son of Jan D'Heere, the leading statuary in the town, and of Anna Smijters, celebrated for her minute and exquisite skill in miniature painting. The books of the guild of St. Luke at Ghent show that the families of D'Heere and Smijters were engaged on art as a profession for several generations, and with the family of Hoorenbault (or Horebout), which also supplied artists to the English court, they seem to have furnished for 150 years the artists to whom most of the local work in Ghent was entrusted.

<sup>a</sup> This paper was republished in 1853, under the title "*Levensschets van Lucas D'Heere, Kunst schilder te Gent*" (xvi<sup>e</sup> eeuw), door Philips Blommaert. 8vo. Gent, 1853.

<sup>b</sup> *Recherches sur les peintres et sculpteurs à Gand aux xvi., xvii., et xviii. siècles*, par Edmond de Busscher. 8vo. Gand, 1866.

The entries are as follows :

- 1413. Lucas Smijters, schildere, Meester.
- 1425. Lucas Smijters, ghesworene.
- 1439. Lucas Smijters, Deken.
- 1459. {Andries De Heere, schildere, Meester.  
Jan De Smijters, beeltesnider, Meester.
- 1461. Govaert Smijters, f<sup>s</sup> Lucas, sch., Meester.
- 1472. {Joris De Heere, schildere, Meester.  
Jan Smijters, schildere, Meester.
- 1476. Joos Smijters, f<sup>s</sup> Jan, schilder, Meester.
- 1477. Andries De Heere, ghesworene.
- 1480. Jan Smijters, f<sup>s</sup> Jan, Meester.
- 1481. Jan De Heere, f<sup>s</sup> Joris, beeldem, Meester.
- 1482. Jan De Smijters, beeldem, Meester.
- 1486. Jan Smijters, ghesworene.
- 1489. Joos Smijters, ghesworene.
- 1490. {Jan De Heere, ghesworene.  
Pieter De Heere, f<sup>s</sup> Joris, Meester.
- 1494. Jan De Smijters, ghesworene.
- 1497. Jan De Smijters, Deken.
- 1499. Jan De Heere, f<sup>s</sup> Jan, Meester.
- 1500. Pieter De Heere, ghesworene.
- 1502. Jan De Heere, Deken.
- 1508. Pieter De Heere, Deken.
- 1521. Pieter De Heere, f<sup>s</sup> Pieter, schilder, Meester.
- 1534. Pieter De Heere, ghesworene,

When the guild was broken up in 1540, among the names were those of Lucas D'Heere, and Jan, son of Jan De Heere.

Jan D'Heere, father of Lucas, was an artist of no mean ability in his own line, as architect and statuary, and he furnished the churches of Ghent with many specimens of his art, which were highly valued by his fellow-citizens. For the cathedral church of St. Bavon he executed the choir-screen (or jubé) in marble, and in the church of St. Peter he made a beautiful monument for Isabella of Austria, sister of the emperor Charles V. and queen of Denmark. Most of his works perished in the iconoclastic outbreaks at Ghent in 1566 and 1578,<sup>a</sup> and

<sup>a</sup> See *Marcus van Vaernewyck, Van de Beroerlicke Tijden in die Nederlanden*, chap. xviii. (Maatsch der Vlaamsche Bibliophilen).

nothing can be now identified. Jan D'Heere was known by the surname of D'Heere, De Heere, Myn Heere, or Mynsheere, and payments to him under one or other of these names are of frequent occurrence in the town accounts.

Anna Smijters was also a celebrated artist in her time. Guicciardini<sup>a</sup> speaks of her as "vrayement peintresse excellente et digne." Van Mander tells us that she painted a windmill with a miller going up the steps, and close by a cart and horses, with other figures, and all so minute that the whole could be hidden under a half grain of corn. It is noteworthy that such a subject occurs among the miniatures in the celebrated Breviario Grimani preserved in the library of St. Mark at Venice. Allowing for some exaggeration on Van Mander's part, it is not impossible that she may have been among the artists employed upon that superb production of the miniature painters at Ghent and Bruges.

Such were the parents of Lucas D'Heere, who had also a brother, Jan; the latter appears to be identical with Jan D'Heere, a painter, and pupil of Gerard Hoorenbault, who went to Spain, and died at Toledo in 1569. Lucas had also four sisters, of whom one married Jan Schuermans, a statuary at Ghent, and of the others Lysbeth married Baudwyn van der Bogaerde, and Marie married Joos Bauvins. Jan D'Heere was obliged to make frequent journeys to Namur and Dinant to obtain marble for his work, and Van Mander says that he often took his son with him, who learnt to make rapid sketches as they journeyed on their barge up or down the river Meuse. Lucas D'Heere was thus thoroughly grounded in the rudiments of his art, and reached the age when it became necessary to apprentice him to some master of his craft.

In 1539 the burghers of Ghent had risen in insurrection against the subsidies levied on them by the emperor Charles V. In March, 1540, the emperor wreaked his vengeance on the city by a decree which annulled all the charters, privileges, and laws of Ghent.<sup>b</sup> The guilds were broken up, including the guild of painters, and reconstituted on a new footing. For a time the arts were at a standstill in Ghent. Jan D'Heere therefore placed his young son as apprentice to his friend Frans De Vriendt, better known as Frans Floris, at Antwerp. Floris was one of the painters who just missed being great: he had studied in Italy, absorbing much of the fiery principles of Michel Angelo, and, with a steadier head and more regular habits, might have ranked among the great painters of the world. From his studio came such painters as the Franckens, the Van Cleefs, and Frans

<sup>a</sup> Lodovico Guicciardini, *Description de tout le Pais-Bas*, &c.; p. 134 (Antwerp, G. Silvius, 1568).

<sup>b</sup> See Motley, *Rise of the Dutch Republic*, Hist. Intro., xi.

Pourbus, and under him Lucas D'Heere made rapid progress. We even learn that Floris was not unwilling to pass off as his own the cartoons executed by D'Heere.

On leaving Antwerp D'Heere started on his "Wanderjahre." He went to France, where he was employed in the service of queen Catherine de Medicis at Fontainebleau, on designs for tapestries and similar works.<sup>a</sup> While on his travels, he appears to have paid his first visit to England, apparently in 1554, and perhaps at the instance of Philip II. of Spain, who, as a patron of art, may be assumed to have been acquainted with the works of Floris and his pupils. In that year Philip was married to queen Mary of England, and the well-known portrait of her, which the Society of Antiquaries is so fortunate in possessing, may have been painted by D'Heere to commemorate the occasion. Other portraits, bearing dates up to 1559, are signed with the monogram ascribed to D'Heere. There is however no documentary evidence of his presence in England at this time.

In 1559 Lucas D'Heere was summoned to Ghent to take part with his father in preparing the cathedral church of St. Bavon for a ceremonial of great historic importance. In May, 1559, Philip II. announced his intention of holding at Ghent a chapter of the Order of the Golden Fleece. This was the twenty-third chapter of the Order, and, as events turned out, the last ever held. A previous one had been held at Ghent under Philip the Good, duke of Burgundy, in 1445. For various reasons the chapter was not held till July. M. Kervyn de Volkaersbeke, in his *Eglises de Gand*,<sup>b</sup> gives an interesting description of the ceremony in St. Bavon. Within the church the floor was covered with rich carpets, and the pillars were draped in sumptuous hangings. Within the choir were fifty-one stalls of gilt and painted wood, each on a dais. Above each stall were suspended the painted armorial bearings of the knight who was destined to occupy it. Tapestries filled the intervals and hung from the galleries above. Among the knights who attended on this occasion were Philip II., William, prince of Orange, the duke of Alva, the counts of Egmont, Horn, and others, whose names have been burnt into history by the tragic events of the ensuing years. The whole of the decorations seem to have been entrusted to Jan D'Heere, his son Lucas, and the latter's fellow-pupil, Benjamin Sammeling. The panels containing the armorial bearings of the knights

<sup>a</sup> In D'Heere's MS. of the entry of the Duc d'Anjou into Ghent, now at Berlin, he alludes in the dedication to that prince to the time which he had spent in the service of his mother.

<sup>b</sup> Kervyn de Volkaersbeke, *Eglises de Gand*, 4to. Ghent, 1857.

were all painted by Lucas D'Heere, and they now hang in the cathedral church as mute yet eloquent memorials of this scene.<sup>a</sup>

It appears probable that the picture of Solomon and the Queen of Sheba, which still hangs in the chapel of St. Ivo in the choir of St. Bavon, was painted for this ceremony, as the picture contains a gross flattery on Philip II., and the curious picture of the Fates making the Horoscope of Charles V., now in the University Library at Ghent, may have been painted on the same occasion. For the next seven years Lucas D'Heere remained at Ghent, where he found constant and honourable employment from his fellow-citizens. He was not only employed in painting, but also in literature, in which he attained to great repute. He revived the decaying arts in the town by opening a painting school, and among his pupils were Carel van Mander, the biographer, Lievin van der Schelde, Marcus Gheeraerts, who afterwards came to England, the brothers Joost and Willem Borluut, and others. Van Mander says that D'Heere painted many pictures and portraits most skilfully, and could have done much more had he not lost much time in the company of high personages who sought him, not only for his merits as an artist, but also for the pleasure of his society. He was on such good terms with certain princes that they made him magnificent presents. He had a fine collection of works of art, such as statues, medals, and the like, in addition to paintings.

The chief patron of Lucas D'Heere was Adolph of Burgundy, grandson<sup>b</sup> of Antony of Burgundy, the bastard son of Philip the Good. Adolph was seigneur of Waeken in right of his mother, and owned a magnificent house in Ghent, where he entertained the emperor Charles V. in 1556. He was admiral of the fleet, and rendered material assistance to the English under Lord Clinton in a fight against the French in 1558. On the abdication of Charles V. Adolph escorted him back to Spain in his own ship. He was one of the recipients of the Golden Fleece at Ghent in 1559, and died at Middelburg on July 6, 1568. D'Heere seems to have been on very intimate terms with his patron, and to have lodged in the latter's house. In 1565 D'Heere published a small volume of poems dedicated to Adolph from his house in Ghent; it is entitled *Den Hof en Boonngaerd der*

<sup>a</sup> They were placed in their present position by order of the chapter in 1771. They were taken down and exhibited at the Heraldic Exhibition held at Ghent in 1889, and a complete list will be found in the catalogue of that exhibition, *Catalogue de l'Exposition d'Art heraldique et des Armoiries des Chevaliers de la Toison d'Or*, Gand, 1889.

<sup>b</sup> He was son of Antony of Burgundy, Seigneur of Beures by Marie, daughter of André de Braem, Seigneur of Waeken.

*Poesien, inhoudende menigherley soorten van Poetijckelicke bloemen: dat is dinaersche materien, gheestelicke, amoureuse, boerdighe, etc. oock dinaersche schoon sententien, inventien en manieren van dichten, naer d'exempelen der Griecsche, Latijnsche en Fransoischen Poëten, en in summa alzulcx dat een yeghelick daen yet in vinden zal dat hem diend oft behaeghd.*<sup>a</sup>

In 1565, D'Heere published a translation of the Psalms, *Psalmen Davids na d'Ebreusche Waerheyt, en d'alder beste exemplairen, oft translation, Liedekins-wijs in dichte ghestelt: op de voysen en mate, van Clement Marot.*<sup>b</sup> This book, although approved by the authorities at Brussels, was among those proscribed by the Inquisition. In 1566 D'Heere wrote an introduction to the Psalms of Peter Dathenus, the famous preacher of the reformed religion.

It is a matter for comment, how Lucas D'Heere, who in 1559 shewed himself the servant and flatterer of Philip II. should in six years be openly identified with the chief leader of the reformed religion. Perhaps the explanation may be found in this way. In his volume of poems there are some addressed to a young lady called Eleanora Carbonier, with whom D'Heere was in love, and whom he subsequently married. He compares their loves to those of Hero and Leander, and refers to the obstacles which kept them apart. Eleanora Carbonier, who seems to have been also addicted to verse-making, was the daughter of Pieter Carbonier, who was magistrate of the town of Vere, in Zeeland, and burgomaster in 1553 and 1558.<sup>c</sup> Vere is a small town close to Middelburg, where the fleet was stationed under Adolph of Burgundy. D'Heere probably came to Middelburg with his patron, and so met his future wife. Pieter Carbonier appears to have joined the reformed church, and to have come to England, where another daughter was married in 1574 to Carolus Rykwaert,<sup>d</sup> *alias* Theophilus, a well-known minister of the Walloon church at Norwich. Love for Eleanora may have led to the adoption of the reformed religion by Lucas D'Heere, who became afterwards a zealous champion in its cause. Among other marks of distinction Lucas D'Heere was chosen a member of the central or ruling "Chamber of Rhetoric," known as

<sup>a</sup> This volume is excessively rare; a copy is in the University Library at Ghent. It was printed by Ghislain Manilius at Ghent in 1565. For a description see Ferdinand Vanderhaeghen's *Bibliographie Gantoise*, i. 184.

<sup>b</sup> Also printed by Ghislain Manilius, *Bibl. Gant.*

<sup>c</sup> See Ermerius, *Zeeuwsche Oudheden*, iii. 60-61. Middelburg, 1792.

<sup>d</sup> See Moens, *Reg. of the Dutch Church, Austin Friars*, "25 Mei, 1574, Karolus Rijckart, gheseyt Theophilus, van Nieukerke met Lowijseken Carboniers van Bevere" (*sic* but Tervere). Also *Archaeologia*, li. 209.



that of "Jesus with the Balsam-flower." Among the other members of this society were such men as Marcus van Vaernewyck, the historian; Abraham Ortelius, the geographer; Hubert Goltzius, the numismatist; Dathenus, the preacher; and the poets Utenhovius and Lampsonius. These "Chambers of Rhetoric" seem to have to some extent united the functions of the press, the modern club, and the Pasquino and Marforio of Rome. They nurtured the seeds of reform and revolution, and expressed popular sentiment in a way which protected them from the lash of the Inquisition. They thus ended by becoming an important political institution. One of their chief duties was to provide material for the civic pageants and festivities. Lucas D'Heere and his father seem to have been the artists most regularly employed at Ghent. We find them engaged in 1562 on the pageants attending the opening of the Nieuwe Vaert Canal, and in the same year, when Egmont brought down the popinjay and won the marksman's crown for the time being.

In 1562 Lucas D'Heere was employed by the Plantin Press at Antwerp to make drawings for the illustrations to a new edition of Sambucus' *Emblems*.<sup>a</sup>

In 1566 the religious dissensions in Ghent culminated in an iconoclastic outbreak. Most of the elder D'Heere's works in marble and alabaster were destroyed by the fanatics, as well as many of the paintings by Lucas. Van Mander, who was a pupil in D'Heere's studio at the time, says that his master was instrumental in saving many works of art from the fury of the mob. In 1568 the long-threatening storm burst upon the Netherlands. Alva let loose the dogs of war and the hated banner of the Inquisition was unfurled. The Blood-Council was instituted, and the famous proscription ensued.<sup>b</sup> At Ghent Lucas D'Heere and his wife were among those proscribed by name,<sup>c</sup> and they fled with many others to England, where they found a welcome and a refuge.

It is doubtful whether Lucas D'Heere ever received letters of denization in England, and there are few traces of his sojourn in this country outside the paintings ascribed to him. In 1571 his name appears among the elders of the Dutch Church at Austin Friars, and in 1576 he was a witness at a baptism in the same church together with Loysken, the wife of Carolus Rykwaert.<sup>d</sup>

<sup>a</sup> See Max Rooses's *Christophe Plantin imprimeur Anversois*, folio, Antwerp, 1882, p. 273.

<sup>b</sup> See Motley, chap. ii.

<sup>c</sup> See Gachard's *Bulletins de la Commission Royale d'Histoire en Belgique*.

<sup>d</sup> Moens, *Reg. Dutch Church. Baptisms*, "31 Mei, 1576. Drossaert, Susanna, f. Pieter; test.: Lucas d'Heere, Loysken ux. Caroli Ryckewarts, etc."





**SCHADE LEER V.**  
**SONNET.**

De sonde heeft wel in het aensien wat schijn  
Van welde en vreught, daer zy smarvels dijnaren  
Lijstigh by loft, als met ghesang en snaren:  
Maer onder soet leyt schadelick vernyn.  
Wat grooter grief comt wt tinnisbuyck van wyn?  
Is vreckheyt niet den buel van die goet garen?  
Gheeft hoerdom niet menigh schendigh beswaren?  
Wat sondaer doth kander weldigh ghesijn?  
Oock dat meer is naer des besvofde vreught  
Volghet haeren loon, deewighe doot, dies meughde  
Ghy daer by sien of zy gheeft wat profijt.  
S'churwt dan de sonde, end volghdt vast na de duughde  
Die ziele, gheeft, end lichaem maect verbeughde.

**SCHADE LEER V** wys te wenden in ghyt.

Dñs Emanueli Demetrio in mutua amicitia tesseram  
Statuit hoc Symbolum Nemis Junij 1576. Londini  
Lucas d'Heere pictor Gand.

DRAWING AND AUTOGRAPH SONNET BY LUCAS D'HEERE  
IN AN ALBUM AMICORUM OF EMANUEL VAN METEREN

Among the Douce manuscripts in the Bodleian Library at Oxford,<sup>a</sup> there is an *Album Amicorum*, formerly belonging to Emanuel van Meteren of Antwerp, the well-known historian of the Netherlands. Meteren commenced this book in 1575, a former volume having been destroyed in the sack of Antwerp by the Spaniards, as Meteren states on the first page.<sup>b</sup>

On one page of this manuscript is a drawing of a siren and an autograph sonnet by Lucas D'Heere, dated at London in June, 1576. (Plate VII.)<sup>c</sup>

In the University Library at Ghent there is another *Album Amicorum*, formerly belonging to Jan Rademaker (or Rotarius), a Flemish resident in London, which contains various poems, including an ode addressed to Rademaker by Lucas D'Heere, in London, on January 1, 1576. Among the poems are the following by D'Heere, besides some verses dated 1568 and 1576 :

In obitum pii et docti viri D. Georgii Wybotii ecclæ Londini belgicæ fidelissimi pastoris Epicedium.

Poeme Heroique sur la devise de Monsieur Thomas Gressem<sup>d</sup> Cheualier par L. Dhere Peintre Gantois.

The volume also contains two sonnets by Philip Marnix van S<sup>r</sup> Aldegonde, accompanying the dedication of a translation of the Psalms, and the gift of a silver cup to D'Heere in London.

The same library possesses a still more interesting volume. Van Mander narrates that Lucas D'Heere, when in England, was employed by the lord high admiral, Edward, lord Clinton, to paint a gallery with figures representing the costumes of all nations; and that when he came to depict an Englishman he described him as almost naked, holding a piece of stuff and a pair of shears, and unable to decide what costume to adopt. It is further said that this allusion to the fickleness of fashion in England was reported to Queen Elizabeth, who was much entertained by the conceit.

In 1865 the city of Ghent acquired a volume of drawings, bearing the title :

<sup>a</sup> Douce MS. 68, purchased by Mr. Douce at Mr. Henderson's sale.

<sup>b</sup> "Cum Hispani hoc omne Antverpiæ inter cætera ALBUM amicorum illi eripuissent, in quo doctissimorum hominum amicorum suorum elogia inerant in locum prioris amissi hoc alterum sibi faciendum curavit, 1575."

<sup>c</sup> There are also autographs and drawings by Philip Galle, G. Hoefnagel, Hubert Goltzius, and others.

<sup>d</sup> Sir Thomas Gresham.

*Theatre de tous les peuples et Nations de la terre, avec leurs habits et ornemens divers tant anciens que Modernes diligemment depeints au naturel par Luc D'Heere, peintre sculpteur gantois.* The volume contains 127 leaves, mostly with figures in water-colour, some copies from older authorities, some studies from the life. Eighteen of these pages are devoted to Great Britain, and contain :

Les premiers Anglois comme ils alloient en guerre du temps de Julius Cesar.  
 Une dame et un Esquier Anglois environ l'an 1400.  
 Un Baron et une Baronesse Anglois environ l'an 1400.  
 Prestre Anglois envers l'an 1200 : une femme bourgeoise de ce mesme temps.  
 Un gentilhomme, une femme bourgeoise d'Angleterre environ l'an 1450.  
 Un seigneur de parlement qu'on appelle Baron : un Seigneur de l'ordre du guartier.<sup>a</sup>  
 Souuerains juges Anglois.  
 Le Mayeur de Londres ainsy qu'il marche à son entrée.<sup>b</sup>  
 Dame et Damoiselle Anglaises.  
 Gentilshommes Anglois.  
 Un hallebardier de la Garde : Un de la livrée du mestier.  
 Une bourgeoise et une marchande Angl.  
 Bourgeoise Anglaise.  
 Seigneur et Gentilhomme Escossois du temps passé.  
 Dame Eschossoyse du temps passé. Femme Eschossoyse.  
 Escossois Sauvage.  
 Irlandois et Irlandoise comme ils alloient accoustres estans au service de feu Roy Henry.  
 Irlandois et Irlandoise.  
 Femme et fille Irlandaises.

At the close of the volume are two most interesting drawings: *Homme Sauvage amené des pais Septentrionaux par M. Furbisher L'an 1576*, a drawing of the first of the two Greenlanders brought to England by Sir Martin Frobisher; and the naked Englishman mentioned above, with the accompanying verses :

Comme on void bien souuent que l'avaricieux  
 Ne peult en rien l'ouir de sa ciche pecune  
 Ainsi de ma despouille estant si desirieux  
 Je demeure tout nu sans en auoir aucun  
 Je ne veux qu'on me taille une robe commune  
 Du cizeau que se tiens un habit trop connu  
 Je veux tousiours changer ainsi comme La Lune  
 C'est pourquoi la pluspart demeure ainsi tout nu.

<sup>a</sup> See *The Magazine of Art*, August, 1891.

<sup>b</sup> Ditto

This idea is taken from Andrew Borde's *Boke of the Introduction of Knowledge*, published in 1542.

The collection of drawings is dedicated to Adolph of Burgundy, whose arms are pasted over those of England at the commencement of the volume. This would perhaps point to D'Heere having commenced it during his first visit to England. Such a painted gallery may have been contemplated or even executed, as galleries and closets lined with painted panels were much in vogue at that time.

In 1576 the "Pacification of Ghent" occurred, and Lucas D'Heere and his wife were enabled thereby to return to their native city. This they did in 1577, and took the oath required under that treaty for exiles returning to their homes.<sup>a</sup> In July of that year they attended the public celebration of the Lord's Supper at Middelburg. Lucas D'Heere now became attached to the household of William, Prince of Orange, and held the office of "greffier de la chambre des comptes et pensionnaire du Prince d'Orange et de Sainte-Aldegonde," and his official duties no doubt left him but little time for painting. In December 1577, D'Heere designed and arranged the pageants on the entry of the Prince of Orange into Ghent, and published the text of the performances in the following year.<sup>b</sup>

In 1580 D'Heere published at Antwerp a translation in prose of Plessis du Mornay's *Treatise on the Church*,<sup>c</sup> in which his style has been much commended.

In 1581 the Netherlands were thrown into great jubilation at the announcement of the betrothal of the Queen of England to François, Duc d'Alençon, afterwards Duc d'Anjou, and for a short time Governor of the Netherlands. Anjou made a formal entry into Ghent on August 20, 1582. Lucas D'Heere as usual designed and composed the pageants and panegyrics on both these occasions. His original manuscript and drawings for the latter occasion were formerly in the library of the Duke of Hamilton, having been purchased in France in 1821, and

<sup>a</sup> See Motley, Part iv. chap. v.

<sup>b</sup> "Beschryvinghe van het ghene dat vertoocht wierdt ter incôste van d'Excellentie des Prince vā Orangien binnen der Stede van Ghendt den xxix Decembris, 1577." It was published in 1578 by the widow of Pieter de Clerck at Ghent; two other editions appeared in the same year. It was reprinted in 1852 by the Société des Bibliophiles Flamands (*Bibl. Gant.*).

<sup>c</sup> *Tractaet ofte handelinge van der Kercke, daer in gheleerdelick ende treffelick ghedisputeert wordt op alle de bysonderste questien, die in onse tyden hebben opgheworpen gheweest. Eerst in francoys ende latijn ghemaect by P. van Mornay, heer van Plessis, Marlyn, etc., ende nu ouerghestelt in nederlantsche sprake ende versiert met cene tafele om alle bysondere printen ende materien te vinden, door L. D'Heere,* published at Antwerp by Jaspar Troyens, 1580.

passed with other manuscripts to Berlin, where this manuscript is preserved in the print room. The manuscript is entitled: *L'entrée magnifique de Monseigneur François, filz de France, frere unique du Roy, par la grace de Dieu duc de Lothier, de Brabant, d'Anjou, d'Alençon, ect., Comte de Flandres ect. Faicte en sa tres-renommée ville de Gand le xx<sup>e</sup> d'Aoust 1582.* It contains eleven watercolour drawings, including one of the prince on horseback. (See Plate VIII.) The text was published by Cornelis van Rekenaeer at Ghent, in French (1582), and in Flemish (1583); the former was reprinted by M. Auguste Voisin in 1841.<sup>a</sup>

In 1584 fresh storms broke over the Netherlands. Orange was assassinated, and the city of Ghent was besieged by the Duke of Parma. Lucas D'Heere again sought refuge in flight. He is stated to have died in Paris on August 29, 1584. His widow attended the public communion at Middelburg in 1585, but his death does not seem to have been certified, for ten years after his name still remained on the list of those by whom taxes and rates were owing to the State.

Lucas D'Heere left two sons, Jacob and Philip, who both followed the Baptist persuasion. Jacob was the father of Jan Jacobs, who founded a sect of Baptists of a somewhat turbulent nature. From Philip, who married his cousin Antje Jansen, was descended the poet and dramatist, Simon Styl.<sup>b</sup>

From Lucas D'Heere's younger brother, Jan Jansen, is descended a family who took the name of Scheltema, from an estate near Boxum, and numbered among its descendants the historian Jacobus Scheltema.<sup>c</sup>

In the family there is still preserved a silver cup with the arms of Lucas D'Heere and his favourite anagram of his name, *Schade leer u*, perhaps the identical cup presented to him by S<sup>r</sup> Aldegonde in 1576.<sup>d</sup> The armorial bearings of Lucas D'Heere were *Sable, a chevron between in chief two escallops and in base a star argent.*

One important literary work by Lucas D'Heere remains to be noticed. He commenced a kind of biographical history in verse of the great artists of the Netherlands. Carel van Mander, who appears to have taken the idea of his own great work from this, says that he was unable to get hold of it in spite of

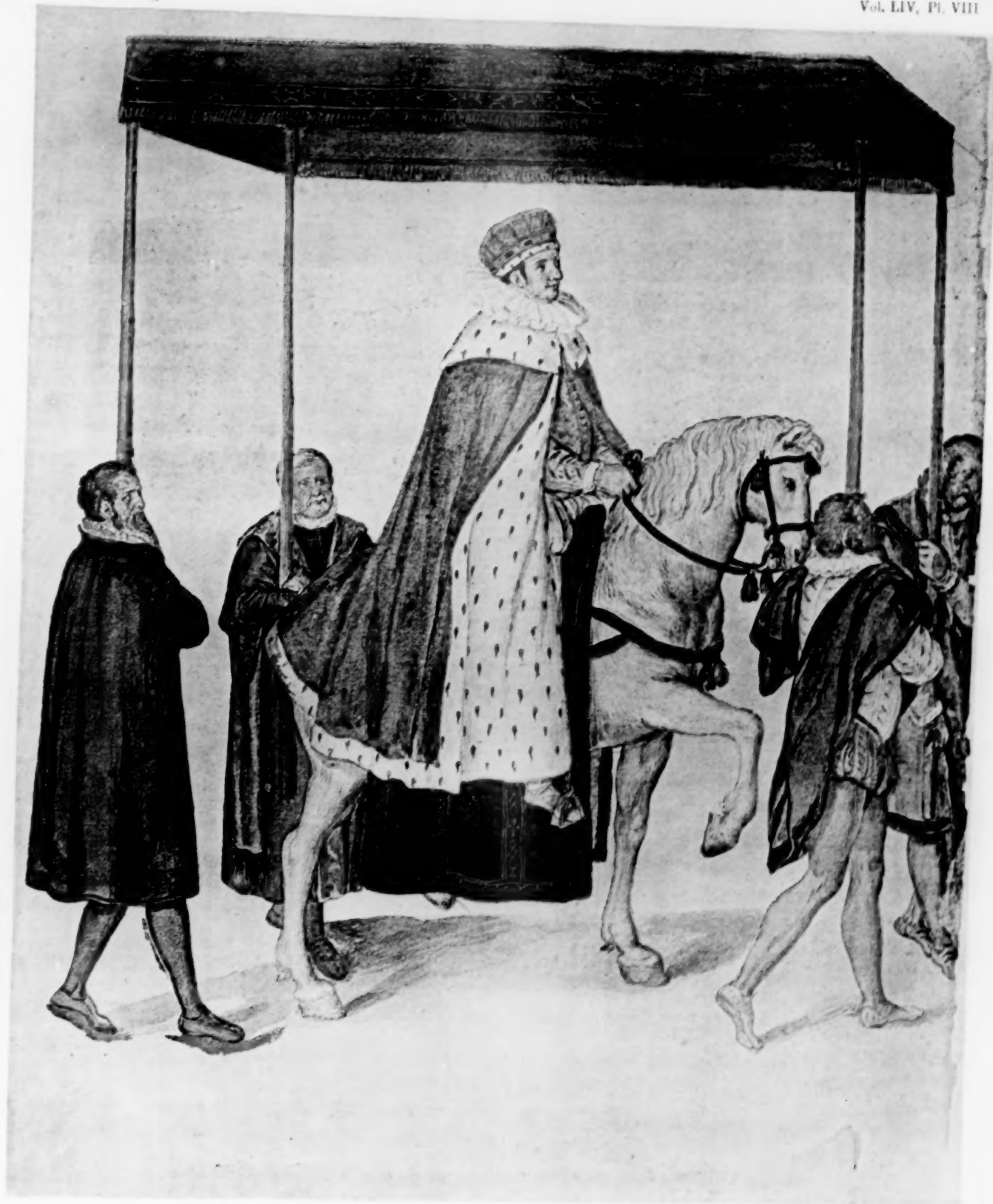
<sup>a</sup> A copy of the French edition of 1582 is among the books on Pageants bequeathed by Mr. F. W. Fairholt to the Society of Antiquaries.

<sup>b</sup> *Levenschets van Simon Styl door Jacobus Scheltema.* 8vo., Amsterdam, 1804.

<sup>c</sup> *Het Leven en de Letterkundige Verrigtingen van den Geschichschrijver, Mr. Jacobus Scheltema, beschreven door P. Scheltema.* 8vo., Amsterdam, 1849.

<sup>d</sup> See page 67.





FRANÇOIS, DUC D'ANJOU, ENTERING GHENT

FROM A DRAWING BY LUCAS D'HEERE

*In a Manuscript formerly at Hamilton Palace and now in the Royal Print-room, Berlin*



many attempts. In May, 1824, a sale took place at Paris, of the books, pictures, etc. belonging to M. Louis de Potter; these included the collection of costumes referred to before,<sup>a</sup> and a manuscript, which answered to the description of Lucas D'Heere's biographical history of the Flemish painters. This latter manuscript was withdrawn from the sale, and was for a short time in the hands of the well-known amateur, M. Delbecq, at Ghent. Delbecq made certain extracts from it, which were published.<sup>b</sup> The manuscript then disappeared, and all attempts to trace it have been in vain. It may perhaps exist unknown in some great private English library, just as D'Heere's other manuscript of the Entry of the Duc d'Anjou into Ghent remained so long concealed at Hamilton Palace. The following lines, written by D'Heere as an introduction will serve as a guide for the purpose of identification:

Leest hier van schilders myn vrienden bemint,  
 Autentyke wondere saken,  
 Dat men in schriften maer selden en vindt,  
 Zal dit tracktaet Rennelie maken:  
 Ik denke dat het u zal vermaken  
 Die het jaer duust hebben beleven,  
 Drie hondert ses en sestig beneven,  
 Hebben in 'tland schoon om aenschouwen  
 Veel wonder saken daer sien ontvouwen  
 De oude schilders van pratycke  
 Conden niet danken dat God ons dan sant  
 Alle die manner Zonder gelycke  
 Te Maesycke, in ruudt Kempenland  
 Lucas de Heere  
 Schade leer u.

Lucas D'Heere often used the anagram of his name, *schade leer u*; sometimes he added one or other of his favourite proverbs, "*Pacys is goedt*" or "*'toutste is 'tbeste*." He was a prolific writer of verse, but it will be sufficient to refer, in addition to what has been mentioned before, to the biography in verse of the brothers Van Eyck,<sup>c</sup> which was composed by D'Heere, and was formerly on the

<sup>a</sup> See page 67.

<sup>b</sup> See *Bulletin de l'Alliance des Arts*, Paris, 1845, and *Recherches sur les Peintres et Sculpteurs du Gand au xvi<sup>e</sup> siècle*. Ghent, 1866.

<sup>c</sup> French translation at length in Carel van Mander (Hymans), i. 34.

wall in the chapel of Adam and Eve in St. Bavon, opposite to the famous picture of the Adoration of the Lamb.

In dealing with the pictures ascribed to the hand of Lucas D'Heere, certain difficulties occur at first sight on account of what seems to be an irreconcilable difference between the style of painting in his allegorical or mythological subjects, and that in the series of portraits which bear the monogram **HE** or **HF** or perhaps **LHF** and are usually attributed to him in England.

Van Mander and others relate that Lucas D'Heere was a very active artist during his residence at Ghent. Three paintings however alone remain at Ghent, which can be assigned with any certainty to the hand of D'Heere. They are Solomon and the Queen of Sheba in St. Bavon, The Fates making the Horoscope of Charles V. in the University Library, and a view of the old abbey of St. Bavon, which hangs in the chapter meeting room at St. Bavon.

The first, Solomon and the Queen of Sheba, has been referred to before,<sup>a</sup> as probably painted to form part of the special decorations on the occasion of the chapter of the Golden Fleece, held in St. Bavon, in 1559. It contains a gross flattery on Philip II., who is represented as Solomon, and the following verses are inscribed on the frame :

COLLE SIONA SOLI VENIENS NICAVLO SABAEI  
SPEM SUPER ET FAMAM GRANDIA MIROR AIT  
ALTER ITEM SALOMON PIA REGVM GEMMA PHILIPPVS  
UT FORIS HIC SOPHIÆ MIRA THEATRA DEDIT.

The picture is thinly and loosely painted in the manner of the Floris school, and is of little artistic merit. It is signed "Lucas Derus invenit et fecit, 1559."<sup>b</sup>

The second picture, The Fates making the Horoscope of Charles V., is not signed, but it may safely be ascribed to the hand of D'Heere. The imperial infant, who was born at Ghent, lies on a bed with rich coverings in the centre of the picture. The bed is surrounded by female figures, and at the foot stand the three Fates, with the inscription **CVRRITE FELICI SVB TEGMINE CVRRITE FVSI**. At the bottom of the picture is the inscription **MAGNVN JOVIS INCREMENTVM**.<sup>c</sup>

<sup>a</sup> See page 64.

<sup>b</sup> An etching in outline by C. Onghena accompanies P. Blommaert's *Notice*, and a similar etching by C. T. Felt appears in E. de Busscher's *Recherches etc.*, p. 26.

<sup>c</sup> For a more complete description of the picture, see E. de Busscher's *Recherches etc.*, p. 30.

The third picture is of little importance as it is merely a view of the old abbey buildings of St. Bavon at Ghent, copied from an older view painted by Gerard Hoorenbault for Lievin Huguënois, which is also in existence. D'Heere's copy was done for the chapter of St. Bavon in 1564, and his receipt is still in existence.<sup>a</sup>

D'Heere's other works in Ghent have disappeared or perished, though some were existing as late as 1678. For St. Bavon he executed a triptych containing "The Last Supper," "The Resurrection," and "The Ascension," and some of the windows in the nave were painted by Benjamin Sammeling from D'Heere's cartoons. Other pictures existed in the churches of St. Michael and St. Peter. A picture of "The Brazen Serpent," in the former was with difficulty saved from the fury of the iconoclasts, but all have now vanished.

The church of St. Paul, in the district of Waes, still preserves a "Crucifixion," painted by D'Heere for that church in 1565, and a payment for the picture is still preserved among the church accounts.<sup>b</sup>

The museum at Copenhagen contains a picture of "The Wise and Foolish Virgins," signed with the monogram ascribed to Lucas D'Heere, and dated 1570. At Lille there is a picture of two saints, which is attributed to D'Heere, and a large picture in the Mauritshuis at the Hague representing "The Israelites in the Wilderness," and containing portraits of the Panhuys family, has some of the characteristics of D'Heere, though it is usually credited to Maerten de Vos. All of these pictures, which the present writer has been able to inspect, are painted in the free careless style of the school of Frans Floris, and resemble the drawings in the manuscripts of D'Heere, described before.

In England there are two important pictures which resemble these in style

<sup>a</sup> "Ontfaen by my Lucas d'Heere, uut der hand van Cornelis Breydel, secretaris van myn heere den proost van S<sup>t</sup>. Baefs, de somme van seetich gulden en dat in vulle betalynghe van een groot tafereel waer op S<sup>t</sup>. Baefs med de stede van Ghend neffens gheschildert hebbe by laeste van mynen voornoemde heere T<sup>o</sup>rconden myns hand teeckens hier onder ghesteld dizen xi<sup>e</sup> january xv<sup>e</sup> lxiiiij, Lucas d'Heere, 1564."

<sup>b</sup> "Betaelt aen joncheer Jan de Neue, de somme van xx pp. gr. zoo vele alse de kercke sculdich was meester Lucas, scildere, tot Ghendt, van tscilderen van den taferele staende in den hoghen autær, ende waervan de helft oock x pp.gr ghejont ende betaelt es door den voorn. joncheer Jan.

"Betaelt aen den zelven joncheer Jan de somme van iiij pp. gr., zoo vele alse hy betaelt heeft M<sup>re</sup>. Jan de Smytere, tot Ghendt, voor den voorn, meester Luuc in stede van den ferwelen van den pourpointe die besproken was den selven M<sup>re</sup>. Luuc toegeleyt te werdene, int accoort vant tafereel by hem gemaect voor de kercke, ende by appointemente in ghelde ghegeven," *Journal des Beaux-Arts et de la Littérature*, Brussels, Dec. 12, 1868.

and execution. At Hampton Court Palace there is a picture of Queen Elizabeth emerging from a palace on the left with two ladies, while on the right the goddesses, Juno, Pallas, and Venus start in affright at her appearance.<sup>a</sup> The picture is signed with the monogram, and bears on the frame the inscription:

JUNO POTENS SCEPTIS ET MENTIS ACUMINE PALLAS;  
ET ROSEO VENERIS FVLGET IN ORE DECVS;  
ADSVIT ELIZABETH, JVNO PERCVLSA REFSGIT;  
OBSTVPVIT PALLAS ERVBVITQVE VENVS.

This picture was in the collection of Charles I., and the attribution to Lucas D'Heere dates back to the reign of James II., for in the catalogue of that king's pictures it is stated to be by "De Cheere." It was painted in 1569, and the queen is still depicted as a youthful woman of great personal attractions.

The second picture is in the possession of Mrs. Dent at Sudeley Castle, and was lent by her to the Tudor Exhibition in 1890.<sup>b</sup> It represents Henry VIII. and his children. Mary stands on the left with Philip, and behind them the god of War; Elizabeth stands on the right, attended by the goddesses of Peace and Plenty.<sup>c</sup> This picture must, like the one at Hampton Court, have been painted early in the queen's reign. It bears two inscriptions, one on the picture, the other on the frame. The first runs:

THE QVENE TO WALSINGHAM THIS TABLET SENTE  
MARKE OF HER PEOPLE AND HER OWNE CONTENTE.

the second:

A FACE OF MUCHE NOBELITYE LOE IN A LITTLE ROOME,  
FOWR STATES WITH THEYR CONDITIONS HEARE SHADOWED IN A SHOWE,  
A FATHER MORE THEN VALYANT, A RARE AND VIRTUOUS SOON,  
A ZEALOUS DAUGHTER HER KYND WHAT ELS THE WORLD DOTH KNOWE,  
AND LAST OF ALL A VYRGIN QVEEN TO ENGLANDS JOY TO SEE  
SVCCCESSYVELY TO HOLD THE RIGHT AND VERTVES OF THE THREE.

<sup>a</sup> For a full description see E. Law's Catalogue of the pictures at Hampton Court Palace p. 218, No. 635; also F. M. O'Donoghue's *Descriptive and Classified Catalogue of Portraits of Queen Elizabeth*, (1894) p. 2, No. 5; the picture is reproduced in *The Magazine of Art*, August, 1891.

<sup>b</sup> Catalogue of the Exhibition of the Royal House of Tudor, New Gallery, London, 1890 No. 158; and also a reproduction in *The Magazine of Art*, August, 1891.

<sup>c</sup> O'Donoghue, *Portraits of Queen Elizabeth*, p. 6, No. 18; sometimes stated to be portraits of the Countesses of Shrewsbury and Salisbury.

This picture appears to have been painted, as stated, for Sir Francis Walsingham, and was originally at Scadbury, the seat of the Walsinghams. It afterwards passed into the collection of James West,<sup>a</sup> and thence to that of Horace Walpole at Strawberry Hill, whence it was purchased by Mr. Dent in 1842. It was engraved in Elizabeth's reign with some alterations by William Rogers.<sup>b</sup> It was originally attributed to Sir Antonio More, but bears no resemblance to his work, and a comparison of it with the picture at Hampton Court makes it almost certain that they are by the same hand. The treatment of the allegorical figures is in each case thoroughly characteristic of the school in which D'Heere was brought up, and the portrait figures are quite in the manner of the portraits, which bear the monogram that appears on the Hampton Court picture. It is a well-known feature in the Flemish school of painting in the sixteenth century, that, whereas on the one hand it absorbed much of the Italian facility and fluency of drawing, failing however to acquire any of its beauty or poetry, on the other hand in dealing with portraiture it retained much of the preciseness and restraint, even to coldness, which characterised so many of the Flemish paintings of the preceding centuries. It can be seen in the works of all the Italianised Flemings from Frans Floris to Rubens. Hence it is not a matter of surprise that the portraits assigned to the hand of Lucas D'Heere should show such a difference of treatment from the more showy, decorative, and comparatively valueless pictures, such as those at Ghent. As a portrait-painter he shows himself a careful modeller of features, a student of expression, and withal a wonderful exponent of character in the pose and costume of his sitter.

These portraits mostly belong to the earlier part of his life, and many to the period of his first visit to England. The earliest is the fine portrait of Queen Mary,<sup>c</sup> which is in the collection of this Society, painted in 1554. The small portrait of Lady Jane Grey now in the National Portrait Gallery, if really by D'Heere, can hardly have been painted from the life. There are other portraits of Queen Mary which can safely be attributed to the hand of Lucas D'Heere. In the collection of Colonel Wynne-Finch there is a small portrait of Mary,

<sup>a</sup> From notes of Mr. West's sale on March 31, 1773, it appears that this picture was purchased by Sir Joshua Reynolds for £84, having cost Mr. West only 7s. 6s.; Walpole appears however to have acquired it immediately.

<sup>b</sup> O'Donoghue, *Ibid.* p. 64, No. 134.

<sup>c</sup> Tudor Exhibition, 1890, No. 206; *Magazine of Art*, August, 1891. A copy of this picture was lent to the same exhibition (No. 200), by the Earl of Ashburnham.



holding a document, entitled "The supplication of Thomas Hungad."<sup>a</sup> An enlarged version of this portrait is in the collection of Mrs. Stopford Sackville at Drayton Manor,<sup>b</sup> but it can hardly be accepted as the work of D'Heere, and appears to be an enlarged copy from that belonging to Colonel Wynne-Finch. This portrait of Mary was engraved (in reverse) by Francis Delaram, and a reduction of this plate was published in Holland's *Baziliologia* in 1618. From the numerous copies made of this engraving it would seem to have been the received likeness of the queen. A double portrait of Mary and Philip, in the collection of the Duke of Bedford at Woburn Abbey,<sup>c</sup> painted in 1558, has been ascribed with every probability by Mr. George Scharf, C.B., F.S.A., to the hand of Lucas D'Heere.<sup>d</sup> Possibly another picture in the same collection,<sup>e</sup> that of Edward, lord Clinton, D'Heere's patron, may be also ascribed to him. In Colonel Wynne-Finch's collection also is the interesting double portrait of Frances Brandon, Duchess of Suffolk, and her second husband, Adrian Stokes,<sup>f</sup> well-known from the rather inaccurate engraving by G. Vertue, published by this Society. We learn from Vertue's note-books<sup>g</sup> that this picture was purchased at the sale of Mr. Collevon's collection on February 1, 1726-7, by Edward Harley, Earl of Oxford, and subsequently passed into that of Horace Walpole at Strawberry Hill. At Belhus in Essex, in the collection of Sir Thomas Barrett-Lennard, Bart., there is an extremely fine portrait of Mary Nevill, widow of Thomas Fienes, Lord Dacre,<sup>h</sup> seated writing at a table, before a wall covered with rich flowered stuff, on which hangs a portrait of her ill-fated husband.<sup>i</sup> A good copy of this is at the Vyne, near Basingstoke.<sup>j</sup>

Another curious and interesting portrait, which bears D'Heere's monogram, is preserved at Dunster Castle: it represents Sir John Luttrell, and contains such allegorical verses and figures as we have learnt to associate with the work

<sup>a</sup> Tudor Exhibition, 1890, No. 235.

<sup>b</sup> Tudor Exhibition, 1890, No. 230; kindly lent for exhibition at the Society of Antiquaries, on March 10, 1892.

<sup>c</sup> Engraved by J. Brown for the Granger Society in 1841.

<sup>d</sup> See G. Scharf's Catalogue of the pictures at Woburn Abbey, No. 12.

<sup>e</sup> *Ibid.* No. 23.

<sup>f</sup> Tudor Exhibition, 1890, No. 255, and *Magazine of Art*, August, 1891.

<sup>g</sup> Brit. Mus. Add. MS. 23,070.

<sup>h</sup> See *The Magazine of Art*, August, 1891.

<sup>i</sup> Hanged in 1541 for the murder of a keeper during a poaching fray in Sussex.

See C. W. Chute's *A History of the Vyne*, 147.

of Lucas D'Heere. As at present restored it bears the date 1550, but in all probability the date was originally 1558.<sup>a</sup>

To the year 1558 also belongs the interesting, though unidentified, portrait of a lady, acquired at Southwell in 1885 by the Duke of St. Albans.<sup>b</sup> The following description of this portrait,<sup>c</sup> illustrative of the elaborate costume shown in D'Heere's portraits, may lead to its identification :

"The picture is painted on three oak panels, and measures 3 feet 8 inches high by 2 feet 9 $\frac{1}{4}$  inches wide. It represents in three-quarter length a cheerful-looking lady, aged 61 years in 1558, looking at the spectator and slightly turned towards the right. She wears a red gown with a narrow edging of brown fur, cut across the neck and opening down the front so as to show a dress of black velvet beneath. The sleeves are double, the over-sleeve being tight at the shoulder, but ending at the elbow with a wide border of brown fur, the under-sleeves being of black velvet, slashed and puffed with lace, and ending in lace ruffles at the wrist. Her throat and neck are also covered with lace open down the front, while a gold chain, formed of alternate plain and cabled links, is passed round the neck and under the gown in front. She also wears round the neck a short broad fur boa, and over her shoulders and chest a short black velvet cape lined with lace and turned back, fastened in front by a small triangular gold brooch, set with a topaz. Between her hands, which are raised before her body, she grasps a pair of brown gloves, apparently edged with small pearls. Round her waist hangs a heavy black girdle, ornamented with gold, which is joined in front, the loose end, about 22 inches long, being held up by the third finger of her left hand, and terminating in a gold cross set with dark stones and with a globular pearl pendant. She wears gold bracelets of a curb pattern on her wrists, and rings on the first, third, and fourth fingers of both hands. On her head she wears a close-fitting cap of white linen, turned up in front and at the sides, and over this a triangular cap of black velvet, with a short projecting tuft at the top, her hair being entirely concealed : this cap corresponds with those described by Philip Stubbs as worn by aldermen's wives and the like, in imitation of the 'miniver' caps, worn by the graver matrons of the noble class."

Among the pictures noted in his diaries by G. Vertue as bearing D'Heere's

<sup>a</sup> See Maxwell-Lyte's *Dunster and its Lords*, 73, and *Archaeological Journal*, xxxvii. 281.

<sup>b</sup> This picture was found in the bottom of an old chest in a house opposite the minster at Southwell, and was kindly lent for exhibition at the Society of Antiquaries on March 10, 1892.

<sup>c</sup> For this I am indebted to Mr. W. H. St. John Hope.

monogram are a portrait of Henry Howard, lord Maltravers (1557),<sup>a</sup> in the collection of Mr James West ; a portrait of Antony Kempe "*ætat.* 28 " (1555);<sup>b</sup> and two small portraits in Peter Le Neve's collection, representing Bassingbourne Gawdy and his wife (1557).<sup>c</sup> A portrait of William, lord Howard of Effingham, has been engraved by J. Ogborne as in the Tunstall Collection. An anonymous drawing in the print room at the British Museum, representing "Esther before Ahasuerus," bears the date 1558, and is in every particular characteristic of D'Heere's work. To a later period of D'Heere's life belong certain portraits bearing his monogram, but also dates at which we know that he was resident in Ghent. We learn, however, from Van Mander, not only that he painted many portraits from the life with great firmness and precision, and posed his subjects well, but also that he painted portraits from memory, so like as to be easily recognised. From the works of Holbein and the Clouets, which have been preserved, it is evident that portraits at that date were largely painted from drawings made of the head and features, with notes of the costume and other details, rendering frequent sittings of the subject portrayed unnecessary. To a painter of such precision and quickness of apprehension as Lucas D'Heere it would be an easy matter to supply portraits from sketches of his own, or even of other artists, so that there need not be any difficulty in supposing that the following portraits of English men and women may have been executed in his studio at Ghent.

To this period belong the companion portraits (1562) of Thomas Howard, duke of Norfolk, formerly in the collection of the earl of Westmorland, and of his wife, Margaret Audley, duchess of Norfolk, now in the possession of lord Braybrooke at Audley End;<sup>d</sup> the double portrait of Henry Stuart, lord Darnley, and his brother, Charles Stuart, earl of Lenox, now at Windsor Castle, of which an enlarged copy is at Holyrood;<sup>e</sup> and the fine full-length portrait of Henry VIII., dated 1564 or 1567, in the Master's Lodge at Trinity College, Cambridge, which was copied from the famous mural painting by Hans Holbein at Whitehall.<sup>f</sup>

In the collection of Mr. Vernon Wentworth at Wentworth Castle, Yorkshire,

<sup>a</sup> Brit. Mus. Add. MS. 23,071 ; this portrait appears to have been small and copied from a full length original at Arundel Castle.

<sup>b</sup> *Ibid.*

<sup>c</sup> *Ibid.* 23,070.

<sup>d</sup> Engraved by P. W. Tomkins in Richard lord Braybrooke's *History of Audley End*.

<sup>e</sup> The head of Lord Darnley from this picture was engraved by G. Vertue.

<sup>f</sup> Tudor Exhibition, No. 83.

there is a fine portrait of a lady, usually designated Eleanor Brandon, countess of Cumberland; the picture is unfortunately mutilated on one side, the date, 156, being incomplete, but it would appear to be, with greater probability, a portrait of that lady's daughter, Margaret Clifford, countess of Derby.<sup>a</sup> In the same collection there is a portrait of a lady, signed with the monogram of D'Heere, the date 1563, and the age twenty-four; and from the arms in the picture it appears that she belonged to the family of Wentworth. The portrait was exhibited as "Mary, queen of Scots" in the National Portrait Exhibition at South Kensington in 1866;<sup>b</sup> and again at the "Mary, queen of Scots" Exhibition at Peterborough in 1887.<sup>c</sup> A portrait of Thomas, second lord Wentworth, in the same collection, dated 1564, with the age forty-four, may possibly be also ascribed to D'Heere.<sup>d</sup> At Longford Castle, in the collection of the Earl of Radnor, there is a portrait of a man holding a gun, inscribed *ÆTATIS XLII.* and T.W., and bearing the monogram of D'Heere and a mutilated date MDL—; it has sometimes been erroneously designated Sir Anthony Denny, but the initials probably denote Thomas Windham.<sup>e</sup> Among the portraits in the picture gallery at Dulwich College there is a double portrait of a gentleman and lady, with allegorical symbols of Death, which, from the armorial bearings, appear to represent a husband and wife of the family of Judde: the picture is dated 1560, and is characteristic of D'Heere, though it does not bear his monogram.<sup>f</sup>

At Holyrood Palace there is a portrait, lent by the Duke of Hamilton, which claims to be a portrait of Mary, queen of Scots, and as such was lent to the Stuart Exhibition in 1889.<sup>g</sup> It bears an inscription A°. *ÆTA.* SV. 16. A recent cleaning has brought to light the monogram of D'Heere and the date 1565, so that it cannot represent Mary, who was then in her twenty-third year. The style of the portrait is thoroughly in accord with the works of Lucas D'Heere.

A further search among private collections in Great Britain would, in all probability, lead to the discovery of other portraits by Lucas D'Heere. It is very much to be regretted that his friend Lampsonius, who formed a well-known

<sup>a</sup> Tudor Exhibition, No. 455.

<sup>b</sup> Catalogue, No. 310.

<sup>c</sup> Catalogue, No. 3.

<sup>d</sup> National Portrait Exhibition, 1866, No. 178.

<sup>e</sup> See Waagen's *Treasures of Art in Great Britain*, iv. 355.

<sup>f</sup> J. C. L. Sparkes' Catalogue of the Cartwright collection and other Pictures and Portraits at Dulwich College, 1884, No. 62.

<sup>g</sup> Exhibition of the Royal House of Stuart, the New Gallery, London, 1889, No. 33.

collection of portraits of northern artists, should have omitted to secure one of Lucas D'Heere. A small portrait, sold at the Magniac sale at Christie's on July 2, 1892, which was stated to be a portrait of Lucas D'Heere, was obviously a mere adaptation of a well-known engraving by Lucas van Leyden.<sup>a</sup>

This notice of Lucas D'Heere's life and works cannot be more fitly concluded than by the words of Paquot,<sup>b</sup> who says of D'Heere, "Il était non seulement habile peintre, mais encore bon poète en sa langue, savant chronologiste, fut versé dans les médailles et les antiques, dont il s'était fait un assez beau cabinet, et enfin l'un des plus beaux génies de son temps."

<sup>a</sup> Sale catalogue, No. 33; formerly in the collection of Samuel Rogers.

<sup>b</sup> Jean Noel Paquot, *Mémoires pour servir à l'histoire littéraire des dix-sept Provinces des Pays-Bas*, etc. (Louvain, 1765-1770), i. 422.

#### POSTSCRIPT.

Since the completion of the above account of Lucas D'Heere an article has been printed in the *Proceedings of the Huguenot Society of London*, vol. iv. no. 6, p. 22, entitled "Quelques notes sur les réformés flamands et wallons de 16<sup>e</sup> siècle réfugiés en Angleterre, par Charles A. Rahlenbeck, Secrétaire de la Société d'Histoire de Belgique." M. Rahlenbeck notices Lucas D'Heere, and quotes at length an interesting letter from the *Papiers d'Etat et de l'Audience* in the Archives Générales de Belgique. This letter, dated at Middelburg on July 6, 1576, is addressed by William Prince of Orange to Lucas D'Heere in London. Lucas D'Heere having been recommended to the prince by Marnex van S<sup>te</sup> Aldegonde, the prince writes begging him to be his agent in concluding certain negotiations with Sir Francis Walsingham, and through the latter with Elizabeth.

IV.—*On some remarkable ecclesiastical figures in the cathedral church of Wells.*

*By* W. H. ST. JOHN HOPE, Esq., M.A., Assistant Secretary.

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Read April 8, 1892.

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THE cathedral church of Wells contains, both within and without, a number of ecclesiastical figures of unusual interest. Besides a series of seven effigies of early bishops, all carved at the same time about the end of the twelfth century, there are, in addition to the well-known incised slab of bishop William de Bitton II. 1267-1274, five effigies of pre-reformation bishops, viz.: William de Marchia, 1293-1302; John de Drokenford, 1309-1329; Ralph de Salopia, 1329-1363; John Harewell, 1369-1386; Thomas de Bekinton, 1443-1465. The last-named has also a *cadaver* below. There are, besides, effigies of two seventeenth century bishops, John Still, 1593-1608, and Robert Creighton, 1670-1672.

In addition to these episcopal figures there are four effigies of dignitaries, two in mass vestments, two in choir habit.

Most of these effigies are well known, and I do not therefore purpose to describe them in detail. The seven figures of early bishops are of a conventional type and somewhat rude design. The five later effigies are all admirable examples, the dignified figure of bishop Drokenford with its original colouring, and the finely sculptured alabaster effigy of bishop Ralph de Salopia being amongst the best of their class. Each of the feet of Harewell's figure, in allusion to his name, rests upon a *hare*, beneath which gushes out a *well* or spring of water.

The four effigies of canons present points of interest which call for special notice.

The two figures in mass vestments lie near together in the north-east transept. Both belong to a date *circa* 1330, but as one has no inscription, and the painted name of the other is hopelessly illegible, it is doubtful whom they represent. The

figures are however interesting, as shewing the canon's grey amess (*almutium*) hanging out of the apparel of the *amictus* or amice at the back of the neck. That the ordinary habit was worn under the mass vestments we know from the directions for "the Revestyng of" the abbot of Westminster, "att syngyng hy Masse," printed by Dr. Wickham Legg in a recent volume of *Archæologia*.<sup>a</sup> The "westerer" is therein ordered to "lay lowest the chesebell . a bove that the dalmatyke and the dalmatyk w' y<sup>e</sup> longest slevys uppermost and the other nethermost then hys stole & hys fanane and hys gyrdyll . opou that his albe therepon hys gray Ames a bove that hys Rochett & upper most hys kerchur (*i.e.* amice) w' a vestry gyrdyll to tukk up hys cole (*i.e.* cowl)." William Boys, abbot of Evesham 1345 to 1367, is said to have enriched his church with a set of pontifical ornaments, including a mitre, crosier, rings, gloves, a grey amess, with a rochet, tunicle and dalmatic, and sandals. Both these examples of course refer to Benedictine abbots, whereas Wells was a foundation of secular canons, but here we have two members of the chapter plainly wearing the grey amess of their ordinary habit under the mass vestments, and the same may be seen at Hereford, also a secular foundation, on the beautiful effigy attributed to bishop John Stanbury, 1453-1474. The fine figure of bishop Goldwell at Norwich also shews the grey amess at the back of the neck.

The two other effigies of canons at Wells lie in the eastern aisle of the south transept. The southernmost represents William Byconyll, who died in 1448. He is shewn wearing the ordinary choir habit of cassock, surplice, grey amess and choir cope. The other figure is usually assigned to Henry Husee, who was dean of Wells from 1302 to 1305. The entire tomb is however clearly a century and a half later. The effigy is of alabaster, and represents a canon in cassock, surplice, grey amess and choir cope. Among the sculptured ornaments of the tomb are several small figures of canons holding books, also of alabaster. These have a peculiarity I have not noticed elsewhere. Each is represented in cassock, surplice, grey amess, and choir cope, but the two pendent tails of the grey amess are held together on the breast by a cord which passes through them and hangs down with tasselled ends.

This mode of fastening, which does not occur on the large effigy of the tomb, marks an interesting stage in the history of the grey amess.

The earliest effigies we have which represent this vestment are in the cathedral church of Hereford, where there are five figures in surplices and amesses. Three are by the same sculptor, and of early fourteenth century date. One of the three,

<sup>a</sup> *ib.* 214.



that erroneously assigned to Dean Borew, who died in 1462, but most probably representing John de Swinfeld, precentor in 1294 and 1311, is most carefully figured in Hollis's *Monumental Effigies*. The amess is there shewn like a short cape down to the elbows with long and broad pendants in front and turned back round the neck like a loose, high standing collar. The chief point to notice, however, is that the vestment is quite open in front and not joined on the breast, shewing that it was put on in the fashion of a woman's shawl.

The other two figures by the same carver shew a similar arrangement, but that assigned with some probability to dean John de Aquablanca, 1278-1320, has the amess clasped on the breast by a large morse.

This open form of amess is also seen apparently in another figure at Hereford, a priest in a cope from a cross brass, *circa* 1370. Several other brasses of this quarter of the century seem to shew the amess open down the front.

Passing on into the fifteenth century, when the little pendent tails first become common, the half-effigy of William Tanner, master of Cobham college, who died 1418, in his brass at Cobham shews the grey amess clasped on the breast by a small brooch. Another brass at Cobham, that of Reginald de Cobham, who died in 1420, shews the amess open all down the front under his cope.

The Wells figures on the tomb under notice, and on the neighbouring tomb of William Byconyll, have the amice joined across.

One of the curious drawings at New College, Oxford, made about 1446, for or by Thomas Chaudeler, chancellor of Wells, shews the warden of Winchester college in a furred amess not open in front, but the Fellows who stand by him wear amesses laced up the front.\* Later effigies shew the cape of the amess completely joined across the breast, and thenceforth it was put on over the head. A fine effigy of the very end of the fifteenth century in St. Martin's church, Birmingham, beautifully drawn in Hollis's *Monumental Effigies*, well illustrates the later form. An interesting survival of the old open-shape may however be seen at Hereford, where dean Hervey, 1491-1500, has the amess secured by a large oblong brooch on the breast. The same effigy also shews the more ample development of the cape of the amess, which now began to be made longer behind, and to completely cover the elbows. This form is admirably illustrated by the brass at Christchurch, Oxford, of James Courthope, canon of Christchurch and dean of Peterborough, who died in 1557.

To return to the figures at Wells; the effigy of bishop Still calls for no special remark, representing him as it does in the ordinary episcopal habit of the time, the rochet and chimere, etc. The other post-reformation effigy of bishop Creigh-

\* *Archæologia* lxxx. pl. xiv.

tion, which died in 1672, is a remarkably interesting one; it represents the bishop in a *rochet*, the buttoned sleeves of which appear at the wrists; an unquarrelled surplice; a plain *corded* albe; and a shaped cope with jewelled border fastened by a small *moose* or *brosche*. No cope hood is visible. On the head is a cap with side flaps, over which is a jewelled mitre with labels with fringed ends. The hands are clasped in prayer, and between the body and the right arm is held a crosier.

There can, I think, be no doubt that this distinctly English effigy represents the bishop in costumes actually worn by him, and it is therefore an important piece of evidence of the survival of the ancient episcopal ornaments.

The description of the effigy given by Mr. Bloxam is quite inaccurate. He describes the bishop as "with the mitre on his head, the hood about the shoulders, and seated in the rochet with white sleeves, girt in about the waist. Over the rochet the cope is worn, fastened together by a moose in front of the breast. . . . The chalice and tippet are not apparent. On the right side the pastoral staff is represented, the crook of which is decorated."

But by far the most interesting of the ecclesiastical figures at Wells are those of a remarkable group among the magnificent imagery of the west front of the church, and forming part of the series that originally filled the lowest row of niches.

The lowest row began on the eastern side of the north-west tower, and occupied the front and sides of all the great buttresses (which had two images on each face), and three niches on either side the central doorway.

The group of figures thus consisted now of five, but formerly there were six, images on the northward corner of the north-west tower; four originally being on the buttress that runs east, and two on the eastern side of the buttress that runs north. The south side of the eastern buttress never had any images, although perhaps never built for two or them. On the northern buttress are four more images, but of a different series from that under notice.

The five remaining figures are fully life-size, and considering their age and position are in remarkable good preservation. In each case the figure is that of a man—usually a young man with short and wavy curly hair and shaven crown. The figures are not easily visible from the ground, but are plainly seen by the aid of a ladder.

As the costumes are not identical, and features, it is necessary to describe each in detail.

1. The figure (Plate IX., fig. 1) wears an under dress with tight sleeves, and over that a loose surplice reaching to the feet. From his left wrist hangs a fannion, and over his left shoulder he wears a sash descending the body diagonally in the way



WELLS CATHEDRAL CHURCH. IMAGES OF A DRAGON AND SUB-DRAGON ON THE NORTH-WEST TOWER.



SCULPTURE OF A SAINT, IN THE NORTHWEST TOWER

common to deacons. With the left hand he holds down the front of the opening of his surplice, so shewing the vestment beneath. This has no buttons or division, and may be an albe and not a cassock. The right hand, which hung downwards by the side, is broken off; there are, however, no marks of it having held anything.

2. The second figure (Plate IX., fig. 2) represents a deacon vested in cassock, amice, and girded albe with very tight sleeves. Over the left shoulder he has a narrow stole, only two inches wide, crossing the body diagonally and hanging from under the girdle on the right side. The fanon is not carried as usual on the left wrist, but is hung from the girdle on the left side. The ends of the girdle itself hang down in front as far as the ankles; they are quite plain and not tasseled. In the left hand is carried a closed book, which has a projecting register or marker at the back on the top. The right hand hung down by the side, but is broken away at the wrist, and only the mark of contact of the fingers remains.

3. The third figure is unfortunately lost, and only the stump of the manuscript that held it remains.

4. The fourth figure (Plate X.) is of unusual interest. It represents a deacon in cassock, amice, and girded albe with tight sleeves, with a fanon hanging from the left wrist. Over the left shoulder he wears in the manner of a stole a folded or rolled-up element, which crosses the body diagonally, passes under the girdle, and hangs down on the right side. The ends of the girdle, which is a simple cord, hang down in front; but the girdle itself is hidden under the back of the albe. In his hands the figure holds, away from him, an open book to be read from, as is shown by the way in which it is held and by the projecting register on the top. I have examined this as well as the other figures by the aid of a holder, but can find no signs of letters on the book.

5 and 6. The fifth and sixth figures (Plate XI.) are vested alike in cassock, amices, albes, and long tunicles reaching down to the feet. No. 5 has his left arm broken off at the elbow and his right hanging down by the side. There is nothing to show whether the lost hand held anything. No. 6 has both his hands raised and holds on his left a book with half-opened leaf. On the top a register or marker with long pendent end—now nearly broken away, as in the right hand. This figure shows the albe at the feet under the tunicles, and the sleeves are also seen inside the tunicle sleeves. In both figures the tunicles are slit, or open on each side half-way up.

What these images of deacons represent it is not easy to say. They do not appear to be figures of saints, and, *de ppe*, the loss of the third figure, there are good reasons for assuming that the group consists of three points of figures.

the second and third with some. The first and second were among the best school-graduates in the South.

The third was the second in the school and the first in the church. He was the first in the church to be baptized.

The fourth was the first in the church to be baptized. He was the first in the church to be baptized.

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The twenty-fourth was the first in the church to be baptized. He was the first in the church to be baptized.





WELLS CATHEDRAL CHURCH. MAISON OF A DEATH AND SURVIVANCE ON THE NORTHWEST TOWER.





V.—*Antiquities of the Bronze Age found in the Heatherly Burn Cave, county Durham.*  
*By the Rev. WILLIAM GREENWELL, M.A., D.C.L., F.R.S., F.S.A.*

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Read May 5, 1892.

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THE purpose of the present memoir is to place on record an account of what, in many respects, is one of the most valuable discoveries ever made in Britain of weapons, implements, ornaments, and other things belonging to the Bronze Age. Discoveries of objects of that period have usually consisted of a single article or more accidentally lost, of hoards of founders or vendors, secreted for one reason or another, and of the various sepulchral remains which have been found in barrows, cairns, or other places of burial. These all are of greater or less importance as illustrating the condition and habits of life of the people of that time, and the stage of cultivation and civilization to which they had attained. But the discovery with which this account is concerned possesses a very much higher value than that of any hoard of however great a number of articles, or of any series of objects which relate to a section only of daily life and occupation. It gives us, though perhaps in a lesser degree, much the same information that the lake dwellings of Switzerland and other countries have so abundantly supplied. We possess, in fact, in the discovery about to be described a record in the very things themselves of the entire equipment of a family as it was possessed by them when they perished in their home, as I believe, by a sudden and unforeseen catastrophe.

The place of habitation occupied either permanently or temporarily by this family was a cave in the carboniferous or mountain limestone, a formation well developed in the western part of the county of Durham. It was situated in a ravine formed by Stanhope Burn, a small tributary of the Wear, which falls

into that river immediately to the west of the village of Stanhope, in the same county.

The cave was about a mile north of the confluence of Stanhope Burn with the river Wear, and had the name of Heathery Burn attached to it from a smaller stream which joins Stanhope Burn a little above the site of the cave. The position it occupied was on the left bank of the burn, and was 800 feet above sea-level, and about thirty miles distant from the sea itself. The floor of the cave was ten feet above the present level of Stanhope Burn, which runs through a narrow and steep-sided gorge, now, as it probably has always been, clothed with wood. The place, before it was interfered with by quarrying, was a frequent resort for pleasure parties, and visitors walked on the floor of the cave, little thinking that beneath their feet, sealed up under a coating of stalagmite, were so many relics of its former inhabitants.<sup>a</sup> It was only when the rock, in which the cave was situate, was removed by the working of the limestone for smelting purposes, that it became known that it had been occupied in days long past as a place of habitation and contained numerous records of its use for that purpose.

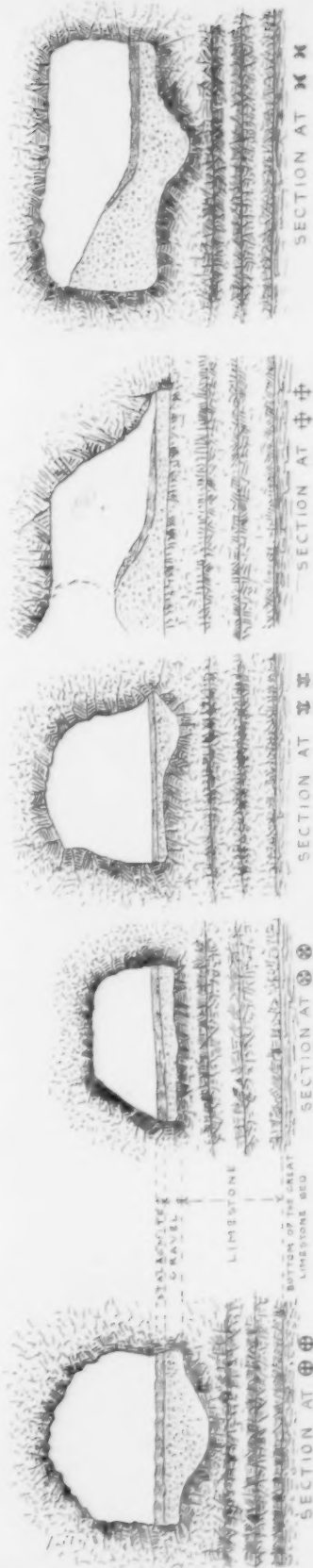
Though the discovery that the cave had once been inhabited was due to the quarrying of the rock, it is unfortunate that in consequence of the necessary mode of working it was impossible to make a careful and systematic examination, and that the objects found came accidentally to light one by one as the floor was removed by the ordinary operations of the workmen. It could not therefore be expected, under these circumstances, that any exact observation could be made of the way in which the several articles were disposed, though many useful facts relative to this were happily noticed and remembered. It was only after many things had been found, and when some parts of the cave had been entirely removed and a larger part where the floor still remained undisturbed had become covered with the rubbish thrown down from the quarried rock above, that I heard of the discovery and had an opportunity of visiting the place. A small portion of the cave was at the time accessible where the roof still existed (L on plan, Plate XII.),<sup>b</sup> and I was able to examine this part and to remove the stalagmite which had accumulated on the floor. Underneath the stalagmite and upon the gravel which rested on the limestone rock were laid apart from each other a bronze

<sup>a</sup> Many records of these visits were left near the original entrance in names written in charcoal and cut into the rock on the sides of the cave.

<sup>b</sup> The letter (L.) and all other letters refer to the plan.

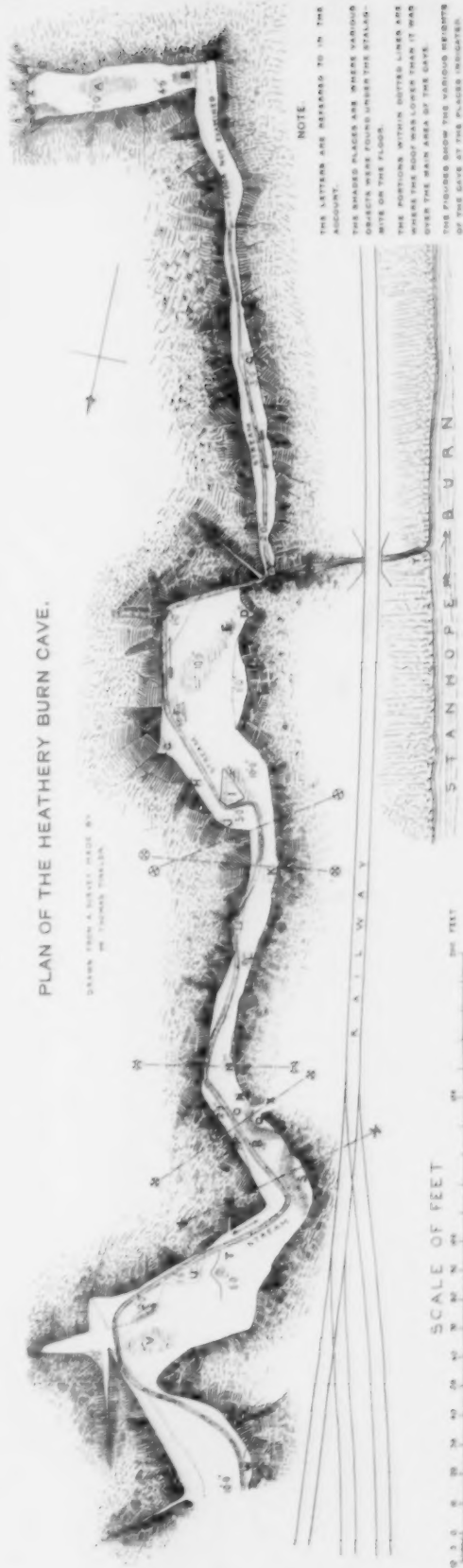
SECTIONS OF THE HEATHERY BURN CAVE.

Scale of 0 10 20 30 40 50 60 70 80 90 100 Feet



PLAN OF THE HEATHERY BURN CAVE.

DESIGNED FROM A SURVEY MADE BY  
MR. THOMAS THORNTON.



NOTE.

THE LETTERS ARE REFERRED TO IN THE ACCOUNT.  
THE SHADED PLACES ARE WHERE VARIOUS OBJECTS WERE FOUND UNDER THE STALACTITE ON THE FLOOR.  
THE PORTIONS WITHIN DOTTED LINES ARE WHERE THE ROOF WAS LOWER THAN IT WAS OVER THE MAIN AREA OF THE CAVE.  
THE FIGURES SHOW THE VARIOUS HEIGHTS OF THE CAVE AT THE PLACES INDICATED.

PLAN AND SECTIONS OF THE HEATHERY BURN CAVE, CO. DURHAM.



ring, a deer's horn implement, and a necklace of three sea-shells, which had been strung on a thin cord, the strands of which were as distinctly visible when the stalagmite was lifted as if it had been spun the day before. I believe these were the only articles found in the cave otherwise than in the operation of breaking up the floor in the process of quarrying.

Before giving a description of the various weapons, implements, ornaments, and other articles found in the cave and the relative places of their discovery, it will be useful to give an account of the cave itself and its position, as well as of some other features connected with it. Its main axis had a direction nearly north and south, and was, more or less, parallel to the ravine through which Stanhope Burn finds its course. At the south end it came in contact with a "trouble," or, as it has been described, a vein of ironstone, which stopped its further extension in that direction. It then turned abruptly at a right angle to the east, and so continued for a distance of 65 feet, having an average width of about 12 feet, forming an eastern limb.

The cave was 7 or 8 feet distant from the side of the ravine, the limestone rock intervening. The floor, as has already been stated, was about 10 feet above the present level of Stanhope Burn, which probably now runs at a slightly lower level than when the cave was occupied. The cave, as in similar cases, had been formed by the wearing away of the sides of a fissure in the rock, through which a small underground current of water, a branch from the Heathery Burn, made its way. This stream had its exit at a place about 160 feet north of the south end (Y), where the cave bends to the east, but there were some appearances which suggested that at one time it had run through what was afterwards the entrance (X). Due to this little stream, which had changed its course from time to time, the limestone floor had become covered with a deposit of gravel and sand not of uniform thickness, but on an average of about a foot. This was overlaid by a bed of stalagmite varying from 2 to 8 inches in depth, but in some places thickening to 12 inches, and being in others entirely wanting.<sup>a</sup>

The deposit of gravel and sand extended over the greater part of the floor, but it was absent in some places, and especially towards the south end of the cave. There were also many indications showing that after the stalagmite had been formed, a wash of water, due probably in a great measure to the small stream which ran through the cave, had in some few places removed the stalag-

<sup>a</sup> On the under side of the stalagmite were many impressions of leaves and twigs of trees. Among them those of the hazel were conspicuous, in some cases accompanied by the nut itself.

mite and gravel, together with bones and other things, and had relaid the whole in irregular masses. At the east end of the eastern extension or limb before mentioned, a large fissure (Z) extended from the roof of the cave to the top of the limestone rock, the sides of which showed many signs of having been scooped out by the action of water. Through this fissure, in times of melting snow or heavy rain, a large current of water must have flowed, which ran at such times towards the north and made its exit by the same outlet (Y), about 160 feet from the south end, through which the constantly running stream from the north made its way. Some of the disturbance of material caused by a wash of water at the south part of the cave was probably due to this cause.

The length of the cave was about 500 feet, the floor sloping gently downwards from the north towards the south, except at a point about a third part of its length from the south end, where it was almost level. It varied considerably in width, ranging in the wider parts from 10 to 30 feet, but narrowing in one place to only 2 feet. The height, which nowhere exceeded 10 feet, was in some parts much less, the roof being at its highest near the middle. The roof was thickly hung with stalactites, and on the floor was a coating of stalagmite, before mentioned, which covered over and preserved the numerous articles that were found beneath it. These relics rested in most cases upon a bed of gravel and sand, and there was no indication that, when the cave was occupied, there had been any deposit of stalagmite upon the bed of gravel, at least in the greater part of the cave. This is a difficult circumstance to account for, as there is no reason to suppose that any very different climatic conditions existed then from those which prevailed up to recent times, and that in those days there was no percolation of water through the rock. It is however possible that prior to the occupation of the cave a volume of water sufficiently large to prevent the accumulation of stalagmite flowed through it, and that this stream to a great extent becoming diverted allowed the stalagmite to be deposited. The large amount of gravel and sand upon the limestone floor appears to favour this view, for the quantity was apparently too great, and some of the pebbles were too large, to have been caused by the small stream which ultimately flowed through the cave.

The surface of the floor was practically level, except that at the south end of the widest part of the cave (D) it rose about 2 feet, and instead of being covered with gravel and sand had upon the solid limestone a deposit 2 feet 9 inches thick of angular fragments of limestone rock. This was overlaid by a band of stalagmite 3 inches thick at the middle, and gradually thinning off at the sides. Upon this was laid a deposit about 1 foot thick containing broken animal bones, portions



of human skulls and bones, as well as other things to be particularised later on, but having no sand or gravel mixed among them. Over this was another band of stalagmite 6 inches thick, which, uniting with that overlying the gravel and sand in other parts of the cave, had apparently been formed at the same time. The ordinary level was again departed from about 60 feet north of the place just mentioned, where an isolated mass of limestone shaped like an isosceles triangle (I), rose up almost to the roof of the cave. It was 12 feet long and 8 feet wide at the base, and was popularly known as "The Communion Table."

The entrance (X) was situated about 115 feet north of this, and about 370 feet from the south end of the cave. It was 5 feet wide and 8 feet high, opening into the cave through a passage about 7 feet long from the east side of the ravine down which Stanhope Burn flows. It was destroyed in 1843 in making a tramway. During the course of these operations some bronze rings, eight in number, said to have been placed upon a piece of bronze wire, were found very near to the entrance. They were given by John Charlton, the finder, to Mr. Cuthbert Rippon, of Stanhope Castle. I have seen the rings, but not the piece of wire, which, if it ever existed, has been lost. They are plain rings of different sizes, precisely like others found in the cave, and I have no doubt that they were discovered at the place and under the circumstances above mentioned. The discovery does not appear to have been thought of much importance, it certainly did not lead to any further search being made. This is somewhat surprising as a hoard of bronze weapons and implements had been found not very many years before at a place only a few miles distant from the cave."

It was not till 1859 that any further discovery took place, when, as before mentioned, the quarrying of the limestone brought to light the valuable series of weapons, implements, ornaments, and other articles which it is the purpose of the present account to describe and illustrate. Some part of the cave had been removed before anything was observed except broken bones, of which a large quantity is said to have been carted away. But when portions of human skulls were found curiosity appears to have been excited, causing a more careful examination to be made. It is possible that among these broken bones, implements of bone, and even of flint or other stone, if not of bronze, may have been removed without their being noticed, but I think it is not likely that many manufactured articles were overlooked.

Through the intervention of the late Mr. John Elliott, to whom the first

\* *Archaeologia Aeliana* (Quarto Series), i. 13.

inquiry after, and preservation of, the relics is due, the discovery was brought to the knowledge of Mr. F. G. Mackie, F.G.S., who gave an account of the cave and engravings of some of the implements to the Society of Antiquaries for publication in its Proceedings.<sup>a</sup> Previous to this Mr. Elliott had given in *The Geologist* two short notices of the cave,<sup>b</sup> and another short one was given to the Archaeological Institute.<sup>c</sup>

On hearing of the discovery I visited the cave, and examined those parts of it which still remained and were accessible. At the same time I obtained from persons connected with the works some information with regard to the various things which had already been found. I was fortunate enough to make the acquaintance of the late Mr. George Tinkler, and his son, Mr. Thomas Tinkler, who both took the most intelligent interest in the discovery. Through them I have been enabled to become possessed of the greater part of the articles found, and of specimens of almost every variety of weapon and implement. I also learnt many valuable details connected with the different finds and their attendant circumstances. To Mr. Thomas Tinkler I am further indebted for a plan of the cave, in which the position of each discovery is laid down. In consequence of having obtained so large a number of the contents of the cave, and of becoming acquainted with almost all those that have been scattered, I am confident that this account will be found to be a full and accurate one, to the best of my ability, of the very remarkable and valuable discovery made in the Heathery Burn Cave.

The finding of various relics began in 1859, and continued to be made at intervals, as the work of quarrying the limestone was carried on, until 1872, after which time I have no knowledge that anything has been found, the work since then having been discontinued.

Before giving a description of the various articles of bronze, bone, and other materials themselves, it will, I think, be desirable to give an account of the relative position they occupied in the cave, which it is possible to do with quite sufficient precision. The places where the several finds occurred are also marked on the plan which accompanies this account.

I propose to begin with a description of the find which was made towards the end of the eastern limb, and then to take the others in order, as they were discovered in quarrying, towards the north, until the extremity at that end is reached. This find (A) took place in October, 1863, when a large number of

<sup>a</sup> Second Series, ii. 127.

<sup>b</sup> v. 34, 167.

<sup>c</sup> *Archæological Journal*, xix. 358.

bronze weapons, and other articles of that metal, together with four bone pins, two boar's tusks, a great quantity of broken pottery, animal bones, and masses of charcoal, apparently the result of fires, were found. The bronze articles comprised two swords, one broken into three pieces, seven spear-heads, seven socketed axes, eight broad armlets, the half of an ordinary penannular armlet, and six discs. The next find (B) was made in September, 1865, just within the eastern limb, and about 28 feet west of the last deposit. It was laid upon the surface of the gravel with no stalagmite over it, and consisted of a long bone knife, spatula-shaped, a bone pin, and a long and thick flake of flint, possibly one of the components of a "flint and steel." The adjoining part of the cave commencing at the extreme south end, where the eastern limb branches off, for a distance of about 60 feet towards the north, has never been explored, and the floor is now covered with so large a mass of rubbish as to render its examination impossible without a great expenditure of labour.<sup>a</sup> At a distance of about 108 feet from the south end, where the cave was not above 8 feet wide (C), a large quantity of broken bones, principally, if not all, those of animals, was found in 1859. They were laid on gravel, at that place 1 foot thick, and mixed among earth which had the appearance of having animal matter among it, and which contained, as was also the case in other parts, large quantities of very small bones and teeth, those of water-voles and mice. About 75 feet beyond this to the north the cave became much narrower, not exceeding 4 feet, and turned to the east for a distance of 12 feet, having a width of not more than 2 feet. The place where it turned to the east is where the small stream which ran through the greater part of the cave found its outlet (Y). The cave then turned again to the north, and assumed its widest proportion, one of 30 feet, continuing, more or less, of that width for about 50 feet. In this space several deposits of relics were met with. The first one (D), discovered in 1861, was found very near the west side of the cave, and about 10 feet from where it turned to the north. It consisted of portions of human skulls, among which were a calvarium and a frontal bone,<sup>b</sup> large numbers of bones, human and animal, a small piece of bronze since lost, broken pottery, and a quantity of charcoal, all mixed with earth, in which was, apparently, much animal matter, all being overlaid by stalagmite 7 inches thick. The whole of the bones of one skeleton were observed by Mr. Thomas Tinkler evidently undisturbed. The body had laid at full length, and the head was to the

<sup>a</sup> In working the limestone from the surface the roof of the cave was everywhere removed, but at this place the floor was not quarried as it was in every other part.

<sup>b</sup> Engraved in *The Geologist*, v. 202.

south. The skull was unfortunately broken by the pick of a workman, and the larger part of the bones, with many others lying near, was carted away. There was nothing to indicate that the body had been buried intentionally, and the overlying stalagmite was quite unbroken. It had no doubt remained there unseen and unthought of since the time when it had been left by the subsiding water, by the agency of which it is probable this occupant of the cave came to an untimely end. Close by was a spot where very evident remains of a fire-place were visible, as indicated by flat stones, reddened by the action of fire, and of charcoal in great abundance. Not above 8 feet north-east of this (E), part of a lignite armlet was found in 1861, under 6 inches of stalagmite, while 36 feet further to the north-east (F), a bone pin and a boar's tusk occurred.

Again, in the same direction and 15 feet further to the north-east, close to the east side of the cave in an angular recess (G), the half of a bronze mould for casting socketed axes (fig. 10), a bronze pin, a bone knife, a bone pin, and a boar's tusk, were found under stalagmite nearly 12 inches thick. Seventeen feet further, but in a north-westerly direction (H), two socketed axes, a bronze knife (fig. 6), a bronze gouge (fig. 16), a bone pin, together with many animal bones and much broken pottery, were met with; this was at a point 12 feet east of the pointed end of the "communion table" (I). At a place (J) immediately to the north of its broader end and 96 feet to the south of the entrance (X), a bronze spear-head, a bronze armlet, an amber bead, an implement of deer's horn, a bone gouge, a boar's tusk, many broken bones and much broken pottery and charcoal were found. Upon the "table" itself, under a coating of stalagmite, some animal bones, a boar's tusk, and charcoal were deposited. The cave was 25 feet wide where the "communion table" was situated, but a little beyond, towards the north, it narrowed to a width of 9 feet, and continued of about the same width to within 16 feet of the entrance, where it began to widen again. In this narrowest part, at a distance of 80 feet south of the entrance and near to the west side of the cave (K), seven bronze socketed axes and a broken one, a bronze armlet made of thin wire (fig. 20) some boar's tusks, sea-shells, including cockle, mussel, and limpet, many animal bones, broken pottery, and charcoal were found in 1861, not long after the discovery of the skulls. At a distance of about 30 feet to the north of the last deposit that part of the cave (L) was situated which I examined myself, and where I found a bronze ring, a necklace of three sea-shells and an implement of deer's horn. Nothing more was discovered until the entrance was nearly reached, where, at a place 16 feet south of it and close to the west side of the cave (M), two bone knives, a bone pin, three bone buttons or spindle whorls,

two instruments of deer's horn, two boar's tusks, and some pieces of broken pottery were found in 1865. At a spot (N) not very far to the south-east of the entrance (X), several articles of bronze were met with; they consist of a "razor" (fig. 7), two ordinary shaped penannular armlets, four rings, six pins, and two disks, one much larger than the other. Just opposite, and 8 feet east of, the entrance (O), a bronze socketed axe and three beads made of stalagmite were found, while not far from them, and close to the east side of the cave (P), a deer's horn instrument and two boar's tusks were discovered. Above 4 feet north-west of the entrance (Q), was a deposit consisting of a pair of bronze tongs (fig. 11), a bronze button (fig. 23), three bronze rings, a bronze pin, a bone knife, a stone spindle whorl, and some flakes of flint; and about 8 feet north-east of this (R) a bronze chisel (fig. 13) was found. The cave, which at a point 28 feet south of the entrance had turned slightly towards the west, at a distance of 56 feet from that point turned again to the north-east, and near the first place of turning (S) a gold armlet (fig. 1) was found in February, 1866. About 45 feet north-east of this (T), on March 12, 1866, another gold ornament (fig. 2), in the shape of a hollow penannular ring, occurred, and close by it, on the following day, a long and thin bone pin, many broken bones and pottery, and much charcoal were met with. About 8 feet north-east of this and not far from the east side of the cave (U) a piece from the middle of the blade of a bronze sword and a broken bronze pin were discovered, October 22, 1867, and three days afterwards the larger part of a lignite armlet was found close by. Thirty-two feet further to the north-east (V), a bronze pin, four bone knives, four bone pins, three incisor teeth of horse, perforated, a dog's tooth, perforated, four boar's tusks, some animal teeth and broken pottery were discovered in August, 1868, among gravel, apparently disturbed by a wash of water. The cave, just north of this place, turned towards the west, the width contracting to 9 feet, but it again immediately expanded to a width of 26 feet. At a distance of about 50 feet from where it turned, the last and a most important discovery was made (W), September 12, 1872,



Fig. 1. Gold Armlet.

†



Fig. 2. Hollow Gold Ring.



when a bronze caldron, two bronze axes, two bronze gouges (fig. 15) a bronze knife (fig. 5) and a small bronze ring were found.

The rock was quarried a little beyond this place towards the north, but nothing, so far as I know, was found there. It is possible the cave may extend further in that direction, but access is difficult on account of the rubbish which has accumulated there during the course of the quarrying operations. It is more probable, however, that beyond this the cave becomes nothing more than a fissure in the rock, through which the small stream, often before mentioned, finds its way.

I now proceed to give an account of the several weapons, implements, ornaments, and other manufactured articles, with the number of each, so far as I have been able to ascertain it, which were discovered in the cave between the years 1859 and 1872.<sup>a</sup> It is possible that a few things may have escaped notice or have been lost, but I believe the list will contain practically all the weapons, implements, and other possessions of the family which occupied the cave during the time when bronze was the only metal in use for offensive and cutting instruments.

To this will be added all the information that has been preserved relating to the human and animal remains. Many bones, including portions of at least two human skulls, were sent to London soon after their discovery, but they have all disappeared, and an inquiry, made at the time and since continued, has failed to discover them.

I commence the list with articles made of gold. Two ornaments of that metal were found. One is an armlet of an ordinary form, penannular, with the ends slightly dilated (fig. 1). It has been made from a strip of thin metal, having the edges turned over so as to appear when worn as if it were solid. It is  $2\frac{3}{8}$  inches wide in the inner and  $2\frac{5}{8}$  inches in the outer diameter and weighs 526·4 grains. The other is a penannular hollow ring (fig. 2),  $1\frac{9}{16}$  inch in diameter on the outer circumference, and  $\frac{7}{8}$  inch on the inner. It weighs 90·8 grains. It is skilfully made by joining two thin plates, one turned over the other at the outer edge, the edges at the inner circumference being held apart by another plate,  $\frac{1}{2}$  inch wide, with >-shaped ends, in order to close the hollow of the ring and give it a solid appearance. This class of ornament, of uncertain use, has been found, though rarely, both in Great Britain and Ireland, and very frequently, as in this case,

<sup>a</sup> Some of the bronze articles were exhibited at a meeting of the Society of Antiquaries, Jan. 20, 1873. See *Proceedings*, 2nd S. v. 426.

associated with armlets. I know of only one other instance where they have occurred in England itself, namely, at Cooper's Hill, near Alnwick, where two were found in a vessel of pottery together with a bronze socketed axe.<sup>a</sup> They are now in the museum of the Society of Antiquaries of Newcastle-upon-Tyne. One of them, which is imperfect, has been ornamented with series of twelve concentric circles of very delicate lines; the other, which is perfect, is quite plain. Another, found in Ireland, has the whole surface covered with fine lines concentric with the circumference.<sup>b</sup>

Before giving a description of the bronze weapons and implements it is necessary to mention a remarkable and quite unexpected fact in connection with the composition of the metal. The bronze used for weapons and cutting implements in Britain and Ireland has hitherto been found to contain only a small proportion of lead, reaching, however, in the case of an Irish sword, to 8·35, where also three per cent. of iron was present.<sup>c</sup> A socketed axe from the cave, analysed by Mr. George Gatheral, of the Tharsis Sulphur and Copper Company, presents the following proportions: copper, 65·20; tin, 8·06; lead, 24·30; iron, ·10; arsenic, traces; sulphur, ·18; total, 97·86. The quantity of lead is therefore extraordinarily large, and is only exceeded by that in some small and supposed votive axes found in Brittany.<sup>d</sup> It is possible that this excess of lead may be due to the abundance of the ore of that metal in Weardale.

This discovery of so many and different instruments of bronze possesses, in addition to their number and variety, a still further interest and value, for it enables us to obtain a fairly accurate estimate of the relative number of each article belonging to and in use by a family of the Bronze Age, a piece of information hitherto scarcely attainable. They consist of weapons, implements of several kinds, and ornaments.

The most important weapon, the sword, was represented by two examples and a portion of the blade of a third. They are of the ordinary leaf-shaped form, well cast and finished, with a handle-plate and holes for rivets to attach the bone or wood, which, in addition to the plate, constituted the handle. One, which was whole, has disappeared without my having had an opportunity of examining it, though I have seen a tracing. The second is broken into three pieces, and a

<sup>a</sup> Tate, *History of Alnwick*, 15; *Archaeological Journal*, xiii. 295.

<sup>b</sup> Wilde, *Catalogue of Antiquities of Gold in the Museum of the Royal Irish Academy*, p. 36, figs. 561, 562.

<sup>c</sup> Evans, *Ancient Bronze Implements*, 421.

<sup>d</sup> Evans, *op. c.* 417.



small portion at the end of the handle-plate, which has four holes for rivets in it, is wanting. It is still  $20\frac{1}{2}$  inches long and  $1\frac{1}{2}$  inch wide at the broadest part of the blade.

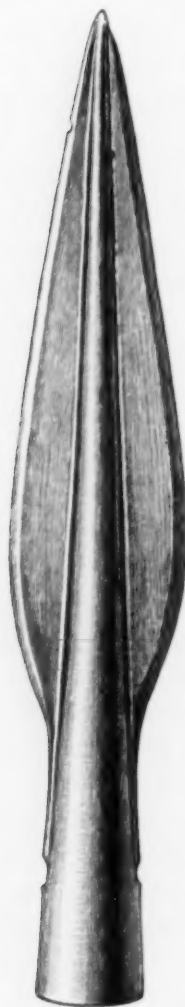


Fig. 3.  
Bronze Spear-head.

The spear-heads were more numerous and consisted of at least eight. They are all very well made, of the leaf-shaped form, and of different sizes, being in length from  $6\frac{5}{8}$  inches to  $11\frac{1}{2}$  inches, and varying in width from  $1\frac{3}{4}$  inch to 2 inches, but the width is not in every case in proportion to the length. One of them (fig. 3) is a very beautiful specimen of this class of weapon, being of most graceful form and good proportion, and the slight rib which runs parallel to the ridge of the socket on each side is as tasteful an addition to such a form as could well be adopted.<sup>a</sup>

The implements, as might be expected, are more numerous than the weapons, and consist of several kinds. There are three knives, two of which have sockets, and the third a tang. Of the first two, one (fig. 4)<sup>b</sup> is  $5\frac{1}{2}$  inches long, and ornamented on each side of the socket with six knobs, survivals, no doubt as ornaments, of the heads of rivets. It has also two holes, opposite each other, in the socket for the insertion of a pin, probably of wood, to fix the handle in the socket. The other (fig. 5), which is 6 inches long, has a plain socket with two holes similar to the last. This form of knife is not an uncommon one, and has been found both in Great Britain and Ireland.<sup>c</sup> The tanged knife (fig. 6), which shows signs of having been much used, is also of a form not unusual in the United Kingdom.<sup>d</sup> It is  $8\frac{1}{8}$  inches long, the tang, which has a ridge upon it to steady it in the handle, being  $1\frac{7}{8}$  inch long.<sup>e</sup>



Fig. 4.  
Bronze Knife.



Fig. 5.  
Socketed Bronze  
Knife.

<sup>a</sup> See also Evans, l. c. 312, fig. 381.

<sup>b</sup> Engraved also in *Proceedings*, 2nd S. i. 130.

<sup>c</sup> Evans, l. c. 205, 206, figs. 240, 243.

<sup>d</sup> Evans, l. c. 212.      <sup>e</sup> Evans, l. c. 212, fig. 252.

A single specimen of the type of knife to which the term "razor" has been applied was met with (fig. 7). It is  $2\frac{7}{8}$  inches long, of which the tang is 1 inch, and  $1\frac{1}{2}$  inch wide. This class of

cutting implement may possibly have been used as a razor, but it is equally well adapted, though perhaps rather weak, for cutting hides or leather, and, indeed, is not unlike a currier's knife of the present day. Precisely similar instruments have been found in Britain,<sup>a</sup> and, as in this case, associated with spear-heads, socketed axes, ordinary knives, and other articles of the Bronze Period. They almost always have the peculiarity of having a triangular-shaped notch at the top, which has beneath its point a small perforation, a feature not easy of explanation.



Fig. 6.  
Flanged Bronze Knife.



Fig. 7.  
Bronze Razor.

As might be anticipated the axe was the implement of which the largest number was found, there being at least nineteen. They are all of the socketed type, with a single loop at the side, and belong to the time when the earlier form of flanged axe had gone out of use. They vary in size from  $3\frac{1}{8}$  inches to 4 inches in length, and the greater number are ornamented with three vertical short ribs upon each face, a common type in the north of England. Others are quite plain (fig. 8), and a single one (fig. 9) has as an ornament a survival of the curved wings of some of the flanged axes.<sup>b</sup>

The occurrence of the half of a mould (fig. 10) for casting socketed axes<sup>c</sup> is in itself a fact sufficient to show, without the



Fig. 8.  
Bronze Axe.

<sup>a</sup> Evans, I. c. 218, 219, where, as fig. 270, that from the cave is engraved.

<sup>b</sup> Evans, I. c. 109, fig. 110.

<sup>c</sup> Engraved also in *Proceedings*, 2nd S. ii. 130.



Fig. 9.  
Bronze Axe.

additional evidence of the presence of a pair of tongs (fig. 11),<sup>a</sup> a waste runner of bronze (fig. 12), and of a piece of copper, that these people manu-



Fig. 10.  
Half-Mould for casting  
Socketed Axes.



Fig. 12.  
Waste Runner of  
Bronze.



Fig. 13.  
Socketed Bronze  
Chisel.



Fig. 14.  
Bronze Chisel.



Fig. 15.  
Bronze Gouge.



Fig. 11.  
Bronze Tonga.

factured their own axes, if they did not also produce other implements as well. Some of the axes found in the cave may well have been cast in this mould and, indeed, probably were so manufactured.

There were only two chisels found, both of them small. One (fig. 13), which has a socket, is  $2\frac{1}{8}$  inches long, the square socket being not quite half an inch wide.<sup>b</sup> The other (fig. 14), also  $2\frac{1}{8}$  inches long, is narrower, and is pointed at the opposite end as if it might have been intended to serve the double purpose of a chisel and an awl or borer.<sup>c</sup>

The number of hollow chisels or gouges was larger, there being three, all, as is commonly the



Fig. 16.  
Bronze Gouge.

<sup>a</sup> Engraved, Evans, l. c. 185, fig. 219.

<sup>b</sup> Engraved, Evans, l. c. 172, fig. 202.

<sup>c</sup> Engraved, Evans, l. c. 166, fig. 191. Similar implements have been found in the Swiss Lake Dwellings, as well as in other places, Keller, ed. Lee, i. 145, ii. Pl. xxxvi. 1, 2.

case, having a socketed end. Two are plain (fig. 15) and measure  $3\frac{1}{4}$  inches and  $3\frac{3}{8}$  inches respectively, the other (fig. 16), which is  $2\frac{3}{4}$  inches long, has a shoulder.

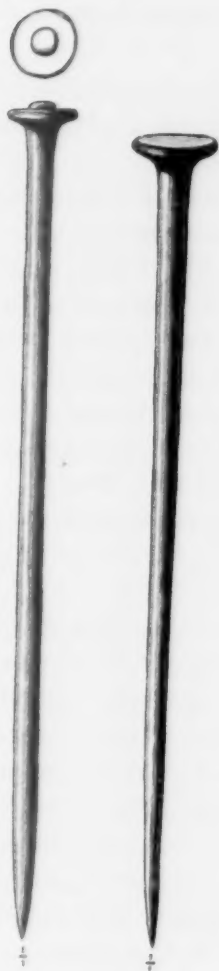


Fig. 17. Fig. 18.  
Bronze Pins.

Pins (figs. 17, 18, 19) were numerous, amounting to at least fifteen.<sup>a</sup> They vary in length, being from  $2\frac{1}{4}$  inches to  $5\frac{5}{8}$  inches long, and have all, with two exceptions, circular flat heads. One of these two has a cup-shaped head,<sup>b</sup> the other, which is  $2\frac{1}{4}$  inches long, has its flattened end turned over into a loop.<sup>c</sup> A thinner and more needle-shaped one, but without an eye, has no head; it is  $2\frac{1}{8}$  inches long.



Fig. 19  
Bronze Pin.

Rings were also numerous, there having been not less than fourteen found, in addition to eight discovered (see p. 91) in 1843. They are all quite plain, and, though differing in thickness, are rather thin. Their outer diameter varies from a little over half an inch to  $1\frac{7}{8}$  inch. Similar rings have occurred on several occasions not unfrequently associated with bronze swords. They were probably used in connection with straps or belts made of hide or some like material, though they may also have served for other purposes.

In addition to the two gold ornaments already described, several ornaments of bronze were found. Among them are three armlets, and the half of a fourth, of the ordinary form, penannular with dilated ends.<sup>d</sup> They are all small, one remarkably so. Of the two I have had an opportunity of examining, the largest is  $2\frac{5}{8}$  inches on the outside diameter, the other being only  $1\frac{5}{8}$  inch.

One (fig. 20) of a quite different form was also found.<sup>e</sup> It has been made from a piece of thin wire doubled over,

<sup>a</sup> One of these (fig. 19) with a narrower head than ordinary is engraved in *Proceedings*, 2nd S. ii. 130.

<sup>b</sup> A similar one is engraved in Wilde, *Catalogue of Antiquities of Bronze in the Museum of the Royal Irish Academy*, 558, fig. 450.

<sup>c</sup> Similarly made pins occur in the Swiss lake dwellings, Keller, ed. Lee, i. 145, ii. Plate xxxiv., 14, 27.

<sup>d</sup> Similar armlets are noted in Evans, l. c., 381, 382.

<sup>e</sup> Engraved in *Proceedings*, 2nd S. ii. 130.

a loop being formed at the middle in the process. The two halves of the wire have then been curved round, the ends of each being made into a hook, both of which clasp the central loop. Similarly formed armlets, but usually of much thicker fabric, have been found elsewhere in Britain.<sup>a</sup>



Fig. 20.  
Bronze Armlet.

middle of the outside.



Fig. 21.  
Bronze Armlet.

upon a nave or on any



Fig. 22. Bronze Disk (front and back).

Age in Britain. There cannot, I think, be much doubt that they are armlets intended to be worn on the upper part of the arm, and probably at the same time that the disks about to be described were worn as a decoration on the breast.

Eight much larger and wider articles (fig. 21), which appear to have more in common with an armlet than with any other decorative object,<sup>b</sup> occurred in close proximity to six disks (fig. 22), apparently ornamental adjuncts to a dress. They consist of hoops of thin metal cast with great skill in one piece. They have on the inside a groove which corresponds to a raised rib at the middle of the outside. One of them has in addition two concentric grooved lines upon the under side of the upper projecting lip, and also upon the upper side of the middle rib, and on the same side of the lower lip. They are  $4\frac{1}{4}$  inches in diameter at the top, 4 inches at the bottom, and  $2\frac{5}{8}$  inches high. Nothing similar, or indeed in any way resembling them, has been found in Britain, nor, so far as I know, any where else, except in connection with chariots, the naves of which have occurred with hoops upon them. Those from the cave have no provision for fixing them

for such a purpose, which has been suggested, there was nothing discovered in the cave to show that the persons occupying it were possessed of any vehicle like a chariot, which, indeed, there is no reason to believe was known to the people of the Bronze

<sup>a</sup> Evans, l. c. 386.

<sup>b</sup> One is engraved in *Proceedings*, 2nd S. iii. 236.

The disks (fig. 22), of which six were found, four being  $5\frac{5}{8}$  inches in diameter and two  $5\frac{1}{4}$  inches, are made of thin metal slightly convex, with a small hole at the centre, a raised rounded rib at the edge, and four loops at the back for attachment to some soft material.<sup>a</sup> I know of nothing like them having been found elsewhere in Britain, except two, which formed part of a small hoard of spear-heads, similar to those of the cave, and socketed axes, discovered in a railway cutting near Newark. They are  $4\frac{1}{2}$  inches in diameter, and very similar to those from the cave, except that they rise more abruptly towards the central hole, assuming a conical form, and have no loops at the back. Among the other bronze articles found near Stanhope, and mentioned before (p. 91), were two portions of what may have been similar disks; they have a hole at the apparent centre and four bosses round it.<sup>b</sup> Disks not very different have been found in France and in Switzerland on sites of lake dwellings, and also in other parts of western Europe; they usually have no hole at the centre, and have a single loop at the back, and are frequently ornamented on the face.<sup>c</sup> Another disk was found in the cave, which I have not had an opportunity of examining. It has been described to me as being of the same size and shape as the others, but in addition having attached to its lower surface, which is without loops, at a distance of about half an inch, a flat ring of bronze, half an inch wide, of the same circumference as the disk. This ring is fixed to the disk, at its edge, by three flat pillars of thin bronze, placed at equal distances, of the same width as the ring itself. A much smaller disk in my possession has been described by Mr. Evans<sup>d</sup> as a button. It is  $1\frac{1}{2}$  inch in diameter, and has nine concentric raised ribs on its face, and five loops for attachment at the back, one at the centre and four at equal distances round and near to the edge. A single specimen of what is certainly a button (fig. 23) was found; it is conical,  $\frac{3}{4}$  inch in diameter, and has a boss at the centre with a raised circular rib round it, a similar one being round the edge. It has a loop at the back.<sup>e</sup>

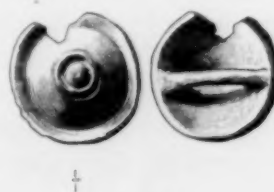


Fig. 23.  
Bronze Button (front and back).

The only other ornament of bronze is what probably is a finger ring. It is  $\frac{7}{8}$  inch in diameter, and has been made out of a thin rod of metal, the ends of

<sup>a</sup> Engraved in *Proceedings*, 2nd S. iii. 237. One of the loops is wanting in the specimen figured.

<sup>b</sup> *Archæologia Aeliana* (Quarto Series), i. 13, Pl. II. 14.

<sup>c</sup> Keller, ed. Lee, i. 174, 175, 180, 244, 294, ii. Pls. LXXII. 1, 5, LXXIII. 1, c. 14.

<sup>d</sup> Evans, l. c. 401.

<sup>e</sup> Evans, l. c. 401. At p. 400 one very similar from Reach Fen is engraved as fig. 499.



which, after having been flattened and widened, have been turned over, the one upon the other.<sup>a</sup>

A quite unique implement was discovered, which Mr. Evans believes is a pair of tongs (fig. 11). It has probably been used in the process of casting, though it is much too weak to lift any except a very light weight. It is just above  $15\frac{1}{2}$  inches long, the loop being  $1\frac{1}{2}$  inch, and the limbs  $\frac{7}{8}$  inch wide. There can scarcely be any doubt that it was part of a founder's apparatus, in connection with which the half of a mould (fig. 10) and a waste runner of bronze (fig. 12) were also found. In addition to these a lump of pure copper was discovered. The waste runner<sup>b</sup> is  $2\frac{3}{4}$  inches long, and the lump of copper is  $2\frac{1}{2}$  inches long,  $1\frac{1}{2}$  inch broad, and  $\frac{1}{4}$  inch thick. Tongs in every way like that from the cave, except in being made of steel, are used in metallurgical laboratories for lifting crucibles and cupels.

A single vessel of bronze was the only one met with. It is a caldron made of very thin metal, but having two massive handles, 4 inches in diameter and lozenge-shaped in section. They are fixed on the inner side of the lip, towards which they hang, and are suspended in two flat loops,  $1\frac{7}{8}$  inch wide, which have five grooved lines upon them. The two upper plates are turned over at the rim upon a rod of bronze. The bottom of the caldron is strengthened by a flat rim with two arms crossing it, the whole, which is cast in one piece separate from the caldron itself, having the appearance of a four-spoked wheel. The arms, which are  $\frac{7}{8}$  inch wide, have five longitudinal ribs upon them, and the ring has the same number concentric to it, except where the arms join it, the ribs, which vary from eight to ten in number, being there cross ones. There are five rivets, one being at the centre and the others one opposite the end of each arm. The vessel is 18 inches high,  $14\frac{1}{4}$  inches wide at the mouth, and  $8\frac{1}{2}$  inches at the bottom, the strengthening ring being 9 inches in diameter, and having an edge  $\frac{7}{8}$  inch deep, which slopes to fit the side of the vessel. The body of the caldron is made of three sheets of bronze neatly riveted, but it has been patched in several places in a ruder fashion. The bottom part, which is  $4\frac{1}{4}$  inches high, has been beaten out in one piece. Several caldrons very similar have been discovered in the United Kingdom,<sup>c</sup> and one, almost in all respects identical, was found in Flanders Moss, Cardross.<sup>d</sup> They have certainly been used for cooking and possibly for other purposes; that found in the cave had upon it when discovered a thick deposit of carbon. The thinness of the metal may have been due as much to a desire to produce boiling rapidly as to a wish to economise the metal.

<sup>a</sup> Evans, l. c. 391.

<sup>b</sup> Engraved in *Proceedings*, 2nd S. ii. 130.

<sup>c</sup> Evans, l. c. 412, 413, figs. 512, 513.

<sup>d</sup> *Proceedings of the Society of Antiquaries of Scotland*, N. S. x. 36, where the caldron is figured.



Some indeterminate small pieces of bronze were met with.

This completes the list of articles of bronze, and the only other article of metal discovered is what may be a spindle-whorl of lead, said to have been found in the cave, but under what circumstances I am ignorant. It is necessary to mention a bronze key of Roman origin, which, though found in the cave, was upon a ledge of the rock about one foot above the flooring of stalagmite, having therefore no connection with the earlier remains except the accident that it was found within the limits of the cave. A halfpenny of Queen Anne and another similar coin, too much defaced for identification, were met with in the gravel and near its surface at a place where there was no deposit of stalagmite.

The number of articles of flint and other stone which were found is small. It is possible, however, that some may have been overlooked. A single arrow-point of flint is said to have been discovered, but there is some doubt about the correctness of this report. It is barbed, but one of the barbs is now broken off. The presence of one arrow-point, supposing it was found in the cave, makes it probable that the bow was known to and used by the people occupying it; but it is remarkable that only one should have occurred, considering what an abundant supply must have been required for the various purposes to which the weapon was applied. The very frequent occurrence of flint arrow-points, under circumstances which prove that they belong to the Bronze Age, shows very clearly that the bow was in common use by the people of that time. It is therefore probable that the occupants of the cave were acquainted with the bow and used it; still the fact that but one arrow-point was met with is not easy to explain. Arrow-points of bronze were not to be expected; for, abundant as they are in some countries, they have not yet been found in Britain, flint having been apparently the only material employed for that purpose during the whole of the Age of Bronze.

A thick flake of flint  $3\frac{1}{4}$  inches long, which shows signs of wear at the pointed end, is possibly one component of a "flint and steel," the other part of which may be represented by a circular piece of clay ironstone; this, however, seems rather soft for the purpose. It is  $2\frac{1}{4}$  inches in diameter, perforated at the centre by a hole  $\frac{1}{4}$  inch wide, which splays to a width of  $2\frac{1}{4}$  inch. The graves of the Bronze Age have enabled us to understand how these people obtained fire by the agency of a piece of flint and a nodule of pyrites or some ore of iron.<sup>a</sup> The flake of flint in question may, however, have been used as a

<sup>a</sup> Evans, *Ancient Stone Implements*, 284, fig. 223; Greenwell, *British Barrows*, 41, fig. 31, 264.

fabricator in pressing off flakes from a flint core, with which use the smoothened end is quite consistent. Two other flakes have been preserved; one of them is pointed at one end and may have served as a borer.

A circular piece of limestone  $1\frac{1}{4}$  inch in diameter, perforated at the centre by a hole  $\frac{1}{2}$  inch wide, may possibly be a spindle-whorl, though the hole seems large for that purpose. It is  $\frac{3}{8}$  inch thick at the middle and thins off to a sharp edge at the circumference.<sup>a</sup> Two whetstones, one  $4\frac{7}{8}$  inches long and  $\frac{3}{4}$  inch square, the other  $2\frac{3}{4}$  inches long and  $\frac{1}{2}$  inch square, having the originally sharp edges rounded by use, are the only articles of the kind which occurred in the cave.

The ornaments made of stone or other substances which may be classed under this head consist of four armlets, made of lignite, all except one (fig. 24) imperfect. The complete one is  $3\frac{5}{8}$  inches in its outer diameter, another is  $4\frac{1}{8}$  inches, and a



Fig. 24.  
Armlet of Lignite.

third, of which a small portion only remains, has a >-shaped cut upon it. In section they are all of the same shape, being rounded on the outer face and flat on the inner.<sup>b</sup> A small unworked piece of lignite was also met with. Two beads made from stalagmite were found; they are both cylindrical and measure  $1\frac{1}{4}$  inch in length. A single round bead of dark-colored amber and a long one of bone were also met with. Two small water-rolled pieces of stone, naturally perforated, have the appearance of having been used, and may very probably have served as ornaments. A necklace of three sea-shells, consisting of two periwinkles and a small whelk, was the only ornament of the kind which was discovered. The circumstances of its discovery have been already described. The shells have been rubbed down on one side into the interior thus forming a perforation. The only other articles which can be classed as ornaments are three incisor teeth of a small horse, pierced for suspension at the root, and two teeth of a dog similarly perforated.

A very large number of implements made of bone, antlers of red deer and boar's tusk, were found in different parts of the cave. The largest of these implements, to which it is difficult to attach a name, have been made from the leg bone of a deer, or some animal of about the same size, split down the middle and then rubbed over the whole surface to a sharp edge on each side, part of the articu-

<sup>a</sup> One very similar in shape but smaller is engraved in Evans, l. c. 419, fig. 384.

<sup>b</sup> A fragment of one of these armlets is engraved in *Proceedings*, 2nd S. ii. 130.

lating end of the bone being left for a handle<sup>a</sup> (fig. 25). Some of them are in shape not unlike an ordinary ivory paper knife which has one end made thicker than the other to hold it by. They are all highly glazed on the surface by use, apparently upon some soft material, and in addition have abundant straight scratches across them. Eight perfect ones, and portions of at least three others, were found, varying in length from  $10\frac{1}{4}$  inches to 12 inches, and having an average width of  $1\frac{1}{8}$  inch. One,  $6\frac{1}{4}$  inches long and  $\frac{7}{8}$  inch wide, is shorter, thicker, and stronger, and seems scarcely to have been made for the same purpose as the others. It is not easy to say what they may have been used for, and they probably served for more operations than one. They may have been knives for skinning or some other process in the preparation of hides, or they may have acted as a kind of spoon for eating some such food as porridge, though for the first they seem to be too weak, and for the other not very well adapted. The most satisfactory explanation of their use is that they were instruments for driving back the woof in the manufacture of woven fabric, and, though they appear to be rather thin and sharp for this purpose, that seems to be their most probable use, to which their glazed surface gives additional probability.

A single specimen of another kind of knife was met with. It has been made from the tusk of a boar, split in half down the middle and brought to a sharp edge by rubbing. It is  $5\frac{1}{2}$  inches long. Similar knives have occurred in barrows accompanying an interment,<sup>b</sup> and in some of the Swiss lake dwelling sites.<sup>c</sup>

Pins were numerous, at least twenty-three have been preserved.<sup>d</sup> They have usually been made from the leg bone of a small animal, broken across in a slanting direction and rubbed to a point, the articulating end having in most cases been left for a head (figs. 26, 27). In one instance (fig. 28), where the head is perforated, the leg bone of a bird has been used;<sup>e</sup> it is  $4\frac{3}{4}$  inches long. They differ



Fig. 25.  
Bone  
Implement.

<sup>a</sup> An imperfect one is engraved in *Proceedings*, 2nd S. ii. 130.

<sup>b</sup> *British Barrows*, 215, 274.

<sup>c</sup> Keller, *Lake Dwellings*, ed. Lee, i. 30; engr. ii. Pl. xx. 16.

<sup>d</sup> One is engraved in *Proceedings*, 2nd S. ii. 130.

<sup>e</sup> One very similar, but not perforated, is engraved in *British Barrows*, 34, fig. 8.

in their manufacture, some being very neatly, others as roughly, made. They vary in size from 3 inches to  $5\frac{1}{4}$  inches in length. Pins of the same shape and make

are of common occurrence, and have been found in places which show they were in use at many and very different times. They are abundant on the sites of the Swiss lake dwellings. A pin of similar shape, made of lignite, was met with; it is  $3\frac{1}{2}$  inches long.



Fig. 26. Bone pin.

Three articles made from similar bones have the appearance of gouges, being in form quite of the shape of that implement; the smallest is  $2\frac{3}{4}$  inches long, and the largest, which has its head broken off, is  $3\frac{7}{8}$  inches. It is difficult to understand what purpose they can have served, though bone chisels are common in the Swiss lake dwelling sites.



Fig. 27.  
Bone pin.  
+

The only other articles of bone which occurred in the cave were buttons or spindle-whorls (fig. 29), of which three were found.\* They have been made out of a pelvic bone or the shoulder blade of some animal. One is  $1\frac{1}{2}$  inch in diameter, and the other two are about the same size. They would very well answer the purpose of buttons, the neck being formed by passing a thong through the hole at the centre and then knotting the end of it.

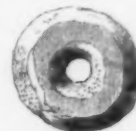


Fig. 29.  
Bone  
spindle-whorl.  
+



Fig. 28. Bone pin.

Several implements made from tines and the beams of red deer's antlers were found. Five of them are perforated by three holes, of which the middle one is larger than those at the ends, and pierces the horn in a direction at right angles to them. They occur in both a curved and a straight form. In one of the

\* One is engraved in *Proceedings*, 2nd S. ii. 130.

curved examples (fig. 30), which is  $4\frac{3}{4}$  inches long, the hole at the broader end does not quite perforate the piece of horn. A straight one, which is  $4\frac{3}{8}$  inches long, has an oblong perforation at the middle, those at the ends being round. A third, also straight, which is imperfect and in fragments, has had at least three series of short very finely-cut straight lines upon it, one being of five, another of seven lines. The curved ones, made from tines, are smaller at one end than at the other, while those which are straight are made from a piece of the beam of an antler and are of equal size throughout. The rough outer part of the horn has in all cases been removed, leaving a smooth surface. A curved one, very like those from the cave, found in the Thames, is in the collection of Mr. Thomas Layton, F.S.A., of Kew Bridge. Precisely similar articles, many of them very well made and bearing a high polish, have been discovered on the site of lake dwellings of the Bronze Age in Switzerland (fig. 31).<sup>a</sup> They are regarded by Swiss archaeologists as the cheek pieces of bridle bits, many of which, made of bronze, but of a quite different shape, have been met with on the

same lake dwelling sites. They do not, however, appear to be suitable for that purpose, nor do the holes show the kind of wear which might be expected had they been used in that connection. I cannot suggest any other explanation, unless they had been employed in the operation of weaving, though in what way I am ignorant. The same idea has suggested itself to others and among them to practical weavers, but, like myself, they could not say in what way they had been used.

Perforated pieces of deer's horn of another kind were discovered in greater abundance (fig. 32). They consist of straight rounded pieces of smoothened horn, pierced at the middle by an oblong hole. Of these implements at least eight were found, varying from

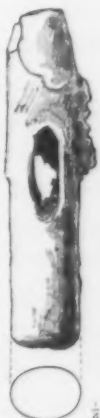


Fig. 32.  
Object of  
deer horn.



Fig. 30. Object  
of deer horn.



Fig. 31. Object of  
deer horn from  
a Swiss lake-  
dwelling.

<sup>a</sup> Keller, *Lake Dwellings*, ed. Lee, i. 174, 226; engr. ii. Pl. XLIII. 1, 10, Pl. XLV. 3, 9. Several implements of deer's horn bearing a general resemblance to those from the cave were found, associated with various articles of the Early Iron Age, in Thor's Cave, near Wetton, Derbyshire. They have two perforations, one at the broader end of the tine extending transversely from the side to the end, the other being about a third of the length from the pointed end, and perforating the horn straight through. They are engraved on Plates 4 and 5 on *Transactions of the Midland Scientific Association*, Winter Session of 1864-5.

2 inches to  $3\frac{3}{4}$  inches in length. Similar articles have occurred in many places, some on Roman sites and associated with other objects certainly of Roman manufacture.

Two or three tines of red deer's antler, cut off at the base but not perforated, were met with. They do not look like unfinished implements, and they appear to have been used at the pointed end.

Many fragments of worked bone and horn were discovered, which cannot be classed with any of the implements above described.

This completes the list of all the manufactured articles except pottery. So far as I know no perfect vessel, or indeed anything like one, was found. A large quantity of fragmentary pieces, principally small, was discovered in all parts of the cave, but the greater portion has unfortunately not been preserved. All the vessels, the remains of which I have seen, have been rather rudely hand-made, without the application of the wheel, but fairly baked, though at an open fire and not in a kiln. The colour varies, but is principally of a pale yellowish tinge with a tendency to red. None of the pieces show any signs of ornamentation, but a fragment of a rim is of a well-made vessel which has had a shoulder, and another has had two perforations immediately beneath the lip, made after it was fired.

Some pieces of wood, evidently shaped, were found, but not in a condition to admit of their being identified as parts of any certain instrument.

The remains of animals,<sup>a</sup> in the shape of bones, horns, tusks, and teeth, were very numerous, principally such refuse as would be left after the beasts themselves had been eaten. The marrow-containing bones, as is usual, had been broken to abstract their contents, which, in the opinion of most people, ancient as well as modern, has always been considered a most enjoyable article of food. The animals whose remains were found comprise red deer (*Cervus elaphus*); roe deer (*Cervus capreolus*); horse (*Equus caballus*), of small size; ox (*Bos longifrons*), chiefly of small and young animals; sheep (*Ovis aries*), a straight-horned variety, almost all immature; swine (*Sus scrofa*), all of domestic and young animals, though some of the tusks may have belonged to the wild species; dog (*Canis familiaris*), a variety as large as the wolf; fox (*Canis vulpes*); otter (*Lutra vulgaris*); badger (*Meles taxus*); hare (*Lepus timidus*); water vole (*Mus amphibius*). Of these, the fox, badger, otter, and water vole had probably used the cave as a place of habitation, and the hare with the birds whose bones were found may have been carried in by the fox for his food. The animal remains, which may be

<sup>a</sup> I am indebted to Mr. A. Smith Woodward, of the Natural History Department of the British Museum, for the identification of the bones found in the cave.



supposed to have constituted in part the food of the occupants of the cave, strongly corroborate a fact which the contents of the barrows,<sup>a</sup> and of an ancient flint working at Grime's Graves, near Brandon, in Norfolk,<sup>b</sup> very markedly emphasize. In all these cases the bones discovered are those of domestic animals, scarcely any of the wild species being met with, though the horns of the red deer, principally however shed ones, are very abundant. The great number of antlers of red deer, which were present to a very large amount at Grime's Graves, seems to point to the plentifulness of that animal, while the very small quantity of bones of the same and other deer and of the wild boar discovered in that and in other pre-historic sites appears to show that the flesh of wild animals formed a very small component in the dietary of these people.

Another fact in relation to food, which has been observed in other connections, is corroborated by the bones found in the cave, where it is seen that the domestic animals used for food were in most cases immature. This fact was evidenced very markedly at Grime's Graves, where scarcely any remains except of quite young calves and pigs were found. The shells of several species of sea molluscs occurred in the cave. They can scarcely be the remains of food, but were probably brought from the distant coast for ornaments or as curiosities. The cockle (*Cardium edule*) was the most abundant, but there also occurred the limpet (*Patella vulgata*); the mussel (*Mytilus edulis*); *Tapes pullastra*; the periwinkle (*Littorina littorea*); *Littorina littoralis*; the little whelk (*Purpura lapillus*); the three last having formed a necklace.

Very large numbers of the shell of the snail (*Helix nemoralis*) were found throughout the cave, having probably gone there to hibernate.

Of the people who occupied the cave, some of the bones, including portions of three skulls, were discovered. They have all been lost, but it is fortunate that before that happened they were examined by Professor Huxley and Mr. Carter Blake, and from an account given by the former in *The Geologist*, I have made this extract: "they appear to belong to the same race of rather small and lightly made men with prominent superciliary ridges and projecting nasal bones."<sup>c</sup>

At the beginning of this account I made the assertion that the discovery of the various articles belonging to the Bronze Age which took place in Heathery Burn Cave was one of the most valuable ever made in this country. I believe

<sup>a</sup> *British Barrows*, 110.

<sup>b</sup> *Journal of the Ethnological Society*, N. S. ii. 419.

<sup>c</sup> *The Geologist*, v. 204. At p. 202 is an engraving of a portion of a skull, a calvarium.



that the many facts which that discovery has brought to light, and which have been here catalogued in detail, will fully justify that assertion.

It is scarcely possible to overestimate the value of the information which the cave and its various contents afford as to the condition of the people who occupied Britain at the time when the cultivation of the Bronze Age had reached its highest development. To that time the occupation of the cave appears unquestionably to belong, for not only does the manufacture of the weapons and implements of bronze exhibit the greatest skill, the result of a lengthened experience in working in that metal, but they show in addition a symmetry and perfectness which testify to an advance in artistic culture which was absent in the earlier stages of the Age of Bronze. Nothing can exceed the graceful form of the spear heads, and when it has been sought to enhance the beauty of their appearance the ornamentation applied has been made with very great taste and effect. The absence of the flanged axe in itself points to the later time of the Bronze Age, as also does the disappearance of the dagger and the occurrence of the sword.

The discovery is especially valuable in a very important particular. It was not, as has already been stated, a discovery merely of one or two or more casual articles, or even of a manufacturer's or dealer's stock in trade, but appears to have included the whole personal and household property of a family as they possessed them when, to use an old charter expression, they were living and were dead.

It will be seen on a comparison of the list of the various articles with the exhaustive account of bronze weapons, implements, and other things contained in Dr. Evans' work, *Ancient Bronze Implements*, how fully they were represented in the cave. The only implements of any importance which were wanting are the hammer, the sickle, and the shield, all of extremely rare occurrence, and the dagger at that time probably superseded by the sword. On the contrary, when we examine the list with reference to what it contains we find how rich it is, for in it are comprehended the sword, spear, knife, "razor," axe, mould for casting axes, chisel, gouge, awl, pin, ring, finger-ring, armlet of more than one form, disks of different kinds, button, caldron, and in addition two ornaments of gold.

When we consider this wealth of possessions it cannot but strike us as a very remarkable thing and one difficult to account for, that a family so endowed with excellent weapons and other necessary articles, and who were evidently in many ways in a condition far beyond that of even semi-civilised people, should have dwelt in a habitation so entirely wanting in almost all the provisions essential for health and comfort. A narrow, damp, and dark cave, for there could be no light,

except artificial, beyond the immediate neighbourhood of the entrance, with a constant drip from the roof, and with a stream of water, liable to overflow, running through it, appears to be such a place of abode as none but savages of the lowest kind would be likely, one would suppose, to inhabit. It is true it might not be their ordinary habitation, but one in use only in cases of emergency, still the occupation could not have been a merely temporary one. The number of the bones of animals which had been eaten was so great that a lengthened period of abode seems to be required for their accumulation, and this probability is increased when the fact that the larger part of these were the remains of young animals is taken into consideration. Nor was it probable that the family would have taken with them the whole of their possessions, which, on account of the number and variety of the articles found, seems to have been done, if they had only fled there for refuge from some apprehended danger which was likely soon to pass away. It is possible that the ordinary habitation of the occupants of the cave might be in the immediate neighbourhood and made after the usual fashion of the dwelling-places of the time, and that the cave was only in use for some special purpose and on extraordinary occasions. If this were the case we might expect them, during their sojourn in the cave, to be in possession of the same flocks and herds, and of the same weapons, implements, and ornaments as they ordinarily used when they were living at what may be called their home. This explanation would remove a difficulty in regard to the occupancy of the cave, for though it would in one sense be a temporary one, yet on the other hand it would have much of the essential elements of a permanent occupation.

In connection with the occupation of the cave, a question suggests itself for consideration. How did it come to pass that all these different and valuable articles were left neglected and exposed in the cave, to be afterwards covered over with stalagmite and so remain unknown and unsuspected for many hundreds of years? There seems to be only one explanation of this remarkable circumstance, namely, that the people to whom they belonged and who inhabited the cave either temporarily or permanently, came to a sudden and unexpected end by a catastrophe of some sort. This might happen in several ways, but there is one which appears to possess those elements of probability which are wanting to the others. They might have been killed by an enemy, but in this case it is scarcely conceivable that the victors should have left the spoils of conquest unappropriated. They might have died by disease, but it would be a very unlikely event that the whole family should all have been carried off in this way at the same time. What seems to be a more probable cause of their death is that they were drowned by an

unforeseen flood which filled the cave before they became aware of it or had time to escape. The ravine through which Stanhope Burn finds its way is narrow, and the level of the bottom of the cave above the present surface of the stream is only ten feet, and at the time may have been less. If we suppose a heavy fall of rain coming on during the night, and the swollen stream bringing down with it trees from its banks and so forming a temporary dam, we have all the elements necessary to fill the cave with water and to drown its sleeping occupants. But a difficulty still presents itself, how did it happen that no one came to the cave when it was found that the people who lived in it had disappeared, and that no one came seems almost certain from the fact that all the weapons and other valuable properties were left there undisturbed until the gradually growing stalagmite sealed them up. It is impossible to explain with any satisfaction this very extraordinary occurrence, but on the whole it would appear as if the occupancy of the cave could not have been known in the locality, and that, therefore, the natural curiosity which would have been excited by the absence of these people had no opportunity for its exercise. The place itself was then remote and secluded, the whole district was probably very sparsely populated; but still it must appear very strange that a family should have lived in the cave certainly for a considerable time, and that no one whatever should be acquainted with its being occupied. Whether it was known or not that the cave was occupied, it is probable that the same flood which drowned the inhabitants also blocked up and so concealed the entrance, and that the cave was not visited until, after a long lapse of years, the stalagmite floor had been formed over the buried remains, which were only brought to light when the rock itself was removed by quarrying.

The Society is indebted to Sir John Evans, K.C.B., V.P., for the loan of the blocks of figs. 6, 11, 13, and 14.

VI.—*On a Remarkable Series of Wooden Busto surmounting the stall-canopies in St. George's Chapel, Windsor.* By W. H. ST. JOHN HOPE, Esq., M.A., Assistant Secretary.

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Read December 1st, 1892.

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THE magnificent stalls in the quire of St. George's Chapel at Windsor differ from those in any other church in this country, on account of their having been built, not for an ordinary collegiate or monastic foundation, but for the knights and canons of the Order of the Garter.

How far this was the case in the old chapel finished by Edward III. about 1348 we cannot now tell, as it and its fittings have perished, and the arrangement of its stalls is unknown, but it is clear from the Statutes that certain of the stalls were assigned to the knights and canons of the new Order.

That the stalls in the new chapel begun by Edward IV. were built for their express use is proved by the actual building accounts. These are to be found in six rolls preserved in the Public Record Office, containing particulars of the receipts and payments for the works of St. George's Chapel from 1478 to 1483. In the first of these are sundry items *pro stallis in choro* and for the making of tabernacles *pro choro*, but in the second of the rolls the items are *pro stallis* <sup>a</sup> *ordinatis pro choro dicte capelle videlicet pro militibus et canonicis*, and similarly in the succeeding rolls the stalls are always described as *pro militibus et canonicis*.

As originally built there were four returned stalls on either side the quire door, and twenty-one against each of the side walls. The first stall on either side was occupied by the sovereign and the prince respectively, and each alternate one after by a knight companion. The twelve intermediate stalls on each side were occupied by those of the twenty-six canons, supposing all were present, who were not engaged at the altar.

<sup>a</sup> *Sic.*

It will be seen from Hollar's engraving in Ashmole's *Order of the Garter* that the canons' stalls differed from those of the knights in having their tabernacles terminated by pinnacles, or "finials" as they are more properly called in the accounts. The tabernacles of the knights' stalls, on the other hand, were carried up to the same height, but in the form of towers, on which rested their helms and crests, while their swords hung below. Since the enlargement of the Order in 1786 the whole of the canons' stalls have been gradually appropriated for the extra knights, and all the finials have now been replaced by towers, as in the knights' stalls.

The custom of surmounting a knight's stall by his helm and sword has prevailed from the foundation of the Order, and one of the first Statutes specially enjoins that "each knight shall have above his stall his helm and his sword, which shall there remain as long as he lives, in token of him who bears them and the defence of Holy Church, as the Order of Chivalry requireth." The hanging up of the banner came in at a much later period.

Both the helm and the sword were originally real ones, but as time went on and helms ceased to be worn, those set up over the knights' stalls at Windsor degenerated into mere "property helms" made out of sheet iron. Real swords probably continued to be suspended for a longer period than actual helms, but they, too, were in time replaced by sham weapons, which have now given way to mere toys made of wood and painted and gilt. Where and in what way the helms were fixed in the old chapel we do not know. In the present chapel they are set up in a particularly interesting fashion. The tower surmounting each stall is open at the top, and into the socket thus formed is fixed one of a very curious series of carved and painted wooden busts. (*See Illustration.*) On these are placed the knights' helms and mantlings, so concealing the busts that their very existence is almost unknown.

By command of Her Majesty the Queen the whole of the busts, except those over the Sovereign's and the Prince Consort's stalls, have been recently taken down and separately photographed. By the kindness of our Fellow Canon Dalton, I am able to exhibit not only the series of photographs, but, through the courtesy of the Dean of Windsor, seven of the actual busts, which fortunately happen to be out of use at this moment through the deaths of extra knights.

It will be seen from the photographs that the busts divide themselves into several groups.

The first and largest of these contains twenty-four busts, all apparently of one date. (Plate XIII., figs. 1 and 2.) The second group contains seven



FIG. 1.



FIG. 2.



FIG. 4.



FIG. 3.







busts, similar in style, but of a different type. (Plate XIII., fig. 3.) The third group contains eight busts of a totally different character; and there are five separate busts which stand alone.

The busts themselves are nearly life size, and evidently intended to represent Knights of the Order of the Garter. Those of the first group, from which the others were copied, are of oak, and have the face painted white and the hair black. Each is exhibited in a white under-vestment and a brown surcoat, open down the front and laced across at the throat and on the breast, and over all a blue mantle doubled white and fastened by a cord with pendant tassels. In most cases the top and back of the head are merely roughed into shape,<sup>a</sup> and the bust is cut off at the level of the elbows. Many of the busts have been sadly injured by ill usage or by cutting down the faces to let the helms slip over them. These injuries also show that the busts have been repainted at various times, since the colour is carried over the mutilations.

The other busts, in most cases, follow the colouring of the first group, but there are a few exceptions, one for instance being painted black.

As to the date of these curious objects, I think there can be no doubt that the busts of the first group belong to the twenty-six original stalls of the knights, and although neither the building accounts nor the treasurer's rolls at Windsor contain any reference to them, there is every reason to suppose they were made within a few years of Edward the Fourth's death in 1483. It appears from the latest of the existing accounts, which extends from January 11, 1483, to the same date in 1484, that the tabernacles of all the stalls were then completed, and the busts that fitted on to the knights' stalls would naturally follow soon after.

<sup>a</sup> Probably because the busts were only meant to be seen from the front.



Stall-canopy and bust in St. George's chapel, Windsor. From a drawing in the Royal Library, Windsor Castle, by C. A. Buckler, Esq. Scale,  $\frac{1}{4}$  inch to a foot.

The close similarity of the second group of busts to those of the first would lead us to think that they were not far removed from them in date. But for nearly four and a half centuries the Order of the Garter was rigidly confined to the original number of twenty-five knights besides the Sovereign, and for them there is practically a complete series of busts. We are, therefore, precluded from dating the second group before 1786, when the Order was first enlarged by seven knights to include the King's sons. No additions were, however, made to the stalls until 1790, when two more were added on each side and four of the intermediate canons' stalls appropriated to the new knights. Great pains were taken when the additional stalls were made in 1790 that the new work should match the old; it is, therefore, very probable that the same care was extended even to the new busts for the helms of the additional knights. This would account for the similarity between the first and second group of busts.

The Order was again enlarged in 1805 by excluding from the 26 knights-companions the lineal descendants of George II., thus increasing the Order by three. In 1814, and again during the present reign, a further increase was made by the creation of extra knights. The additions to the Order in 1805 and 1814, and again in the present reign, necessitated the carving of the third group of busts and the few of later date. So far as I have been able to examine them, these are carved in deal or some other light wood, instead of in oak, and are painted in a more realistic way than the early series of busts.

I was unfortunately unable to be at Windsor when the busts were photographed, and have therefore not had an opportunity of taking notes of each. Those of the first group which I have examined have two round holes in the back, one just behind the neck, the other in the base block. What these were for I do not quite see. Nearly all the busts have also a number cut underneath, with, in some cases, a second cut on the base block. Unfortunately, despite instructions, the noting of these numbers was not systematically made when the busts were photographed, so it is impossible to say exactly what they mean; they appear to give the order in which the busts stood on each side of the chapel.

I do not know that anything further can be said about these curious objects now, but as neither Ashmole, nor Anstis, nor Pote, nor Beltz, nor any other writer on the Order of the Garter or St. George's chapel seems to make the smallest reference to them, I have ventured to bring them to the notice of the Society of Antiquaries.

VII.—*On a Panel Painting of the Doom discovered in 1892, in Wenhaston church, Suffolk.* By CHARLES E. KEYSER, Esq., M.A., F.S.A.

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Read December 15, 1892.

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THE village of Wenhaston is situated in the north-eastern part of the county of Suffolk, between the towns of Halesworth and Southwold. The church, dedicated in honour of St. Peter, stands on high ground, commanding the valley of the Blyth, and about two miles from the grand old priory church of Blythburgh, to which it formerly belonged. Though not to be compared with many of the fine churches in the neighbourhood, yet Wenhaston church possesses various points of interest which may be briefly enumerated, as they may assist us in assigning a date to the panel painting of the Doom, which, by the kindness of the vicar, the Rev. J. B. Clare, is this evening exhibited.

The church consists of west tower, nave, north aisle, south porch, and chancel. In the chancel, at present undergoing restoration, the east window is new, of three lights, in the Perpendicular style; on either side, north and south, is a small lancet window within semicircular containing arch of transitional Norman character; that on the south is mainly new, only traces of the original window having been found. Further west, on north and south, is a two-light window of late-Perpendicular work. The roof is partly renewed, and a new chancel arch of oak with rich cusped fringe, and a canopied niche on either side for figures of SS. Peter and Osyth has been inserted.

On the south is a small doorway with exterior hoodmould and hollow chamfer on arch and jambs, probably of early-Decorated date. Dividing the nave and chancel the old roodbeam remained *in situ*, with traces of the original colouring and gilding still visible upon it. Above this was a large arched partition reaching up to the roof and thickly coated with whitewash. On the north side of the nave

is an arcade of three arches with two chamfered orders resting on octagonal columns and responds of the late-Decorated period. The tower-arch is almost concealed by a gallery, but appears to be of the same date. The nave-roof is a fair specimen of the rich fifteenth-century timber roofs abounding in the district. It is high pitched and of the hammer-beam type, but the figures at the ends of the hammer-beams have been removed. There is a very nice wall-plate with cresting, and shields in the spandrils. The whole has received a liberal application of brown paint, which will, it is hoped, be shortly cleaned off. The aisle-roof is a lean-to of the same date, with roses, etc. carved on the bosses. All the windows of the nave and aisle are of three lights, four centred late-Perpendicular, *circa* 1500. Only one small fragment of ancient yellow glass remains. This is accounted for by the fact that an entry occurs in the churchwardens' accounts of 1643 of a sum of money "layde out to pay men w<sup>ch</sup> came to break pictures in glasse windows." Further payments were made to them for another good work in which they were engaged, viz. "the removal of the top of the font and the organs from the church." There is a curious little window of debased character high up in the south wall at the east end of the nave. This may originally have been pierced to give additional light to the pulpit which stands in this corner, or it may be even earlier and have some connection with the panel painting of the Doom. The font is still very handsome, though it has undergone very cruel usage. It is of a hard stone or marble, and of good Perpendicular character. The bowl is octagonal with a deeply recessed arch on each face, and a receding buttress on each angle. There have clearly been sculptured subjects within the arches, probably representations of the Seven Sacraments, and our Lord's Baptism or Crucifixion, as we find on the fonts at Westhall, Cratfield, and Laxfield, in the same neighbourhood. The stem of the font is panelled and with delicate buttresses on each angle. There have been figures, at least on the cardinal faces of the stem, but these have all been hacked away. Traces of colour and gilding remain on it. The following entries in the churchwardens' accounts describe the attention paid to the font in 1809: "On April 29th, to repairing the Font, 2 picces of stone for ditto 2s. 0d., to three cramps at 4d. plaister 6d. 1s. 6d. Labour selfe and man cutting out the ornaments, &c. 12s. 6d." On the 2nd of May, the sum of £2 5s. is expended on painting and gilding the font, and at the same time 14s. was laid out in painting the gallery twice over. This gallery occupies the west end of the church, nearly blocking up the tower-arch, and will it is hoped be removed as soon as possible. Three old bench-ends of the type so

rich and common in this district still remain with handsomely carved poppy heads. The pulpit is of varnished oak, very nice Jacobean. A series of griffins round the upper part have all been deprived of their heads, probably by the zealous reformers of 1643. The panelling of the reading desk is of the same period. The tower of flint is lofty with mutilated battlements, and belfry lights recently renewed. The angle buttresses are panelled with flint and stone work. The west window is of two lights of late-Perpendicular date. The tower is probably of the late-Decorated period and coeval with the nave arcade. The south porch has blocked-up east and west windows, and an outer arch of two chamfered orders, with a series of roses in a hollow on the hoodmould. Above is a niche for the image of the patron saint. The inner south doorway is a good specimen of the late-Perpendicular style of architecture which abounds in the neighbourhood. It has a square label with four-leaved roses on it and the hoodmoulding of the arch. In the spandrils are shields, one charged with the verbal emblem of the Trinity, and the other with the Instruments of the Passion. At intervals on the soffit of the arch, and partly down the jambs, are twelve shields suspended from single roses. No armorial bearings now remain. The door is ancient with a nice escutcheon and other old ironwork. There is an ancient silver communion cup and paten belonging to the church, a date, 1567, appearing on the cup. A large silver flagon with sporting scene engraved upon it bears date 1790.

Some interesting parish accounts, which go back to 1589, have also been preserved, and contain various items descriptive of works, many unfortunately of spoliation and destruction, carried out in the church at various times.

Such is a brief account of the church, which the vicar, the Rev. J. B. Clare, commenced to restore in the summer of the present year (1892). The first part undertaken has been the chancel, and designs for this portion of the work, including the new chancel-arch, have been prepared and carried out by Mr. E. F. Bishopp, the diocesan surveyor. During the progress of the work portions of the old rood-screen with remains of the original coloured decorations were discovered, also in the east chancel wall some relics of a former Norman church, comprising part of a spiral shaft and some other small fragments. An important part of the scheme of restoration was the removal of the partition which separated the chancel from the nave, and accordingly this was taken down and placed in the churchyard. During the night a heavy shower of rain washed off some of the layers of plaster and exposed to view a portion of the panel with parts of the figures of the Blessed Virgin and St. John the Baptist upon it.

Information was at once given to the vicar, under whose direction the boards were carefully washed and a missing portion searched for and found among the *débris*. The whole was then carefully put together and set up in the old school-room close by, and as the result we have one of the most interesting panel paintings which have been noted in recent times. (Plate XIV.) The size of the picture is 8 feet 6 inches in height in the centre, by 17 feet 3 inches in the broadest part, and it is painted on a series of boards, which appear to have been partly bonded together by the representation of the holy rood affixed to them. This has entirely disappeared, but the outline of a large cross *ragulé* in the centre with a figure on either side is clearly discernible. The cross, on which no doubt hung a figure of our Saviour, occupies nearly the whole height of the picture with widely extended arms, while the figures of the Blessed Virgin and St. John the Evangelist on either side were about 4 feet 6 inches high. The whole of the intervening and surrounding spaces are occupied with the subject of the Doom, so commonly found over the chancel arches of our English churches. The painting is in distemper. The general ground-work of the picture has been olive-green, and a considerable variety of colouring has been used in depicting the several portions of the subject. In the upper part above the dexter arm of the cross, and on the north side of the picture is a figure of our Blessed Lord seated on the rainbow. He has dark hair and a star-like nimbus, the gilding on which was very distinct when first brought to light. A bright red mantle is thrown loosely round the body so as to leave the right side bare. He has the two fingers of the right hand extended in the attitude of benediction, and drops of blood are falling from the wounds in the hands and right side. Above his head is a representation of the sun, and from his right hand proceeds a scroll, no doubt with the inscription "Venite Benedicti," but no trace of this now remains. In a corresponding position on the sinister side of the cross is a kneeling figure of the Blessed Virgin, also with dark hair and golden nimbus, but not crowned. She has a red cloak and blue dress somewhat faded, and her hands are raised in a supplicating attitude. Behind her and kneeling with hands raised towards the great Judge is a figure, also nimbed, with dark hair and beard, a coarse yellow garment and bare legs, doubtless intended for St. John the Baptist. Above the head of the Virgin is the moon, and at the side a scroll probably charged with the words "Discedite Maledicti," but here again no inscription is discernible.

The lower part of the subject is divided into four main groups between and on either side of the formerly attached sculptures forming the holy rood. Below









PANEL PAINTING OF THE DOOM

*Size of original*



... of god shall receive to them ...  
 ... of god ...

FROM WENHASTON CHURCH, SUFFOLK.

... 17 ft. 3 in. by 8 ft. 6 in.



the figures of the Virgin and St. John the Baptist is the subject of the weighing of souls. A majestic figure of St. Michael with dark hair and extended wings, cross on his forehead, red mantle and white vestments, holds the sword of justice in his right hand and the balances in his left. In the sinister scale are two small demons, while the good deeds of the soul which is being weighed are as usual portrayed by a small naked figure in the dexter scale. On the south side is a large portraiture of Lucifer or Satan, a black demon with horns and diabolical features, a pair of bat's wings, long tail, and eye in his belly. He is taking an active part in the soul weighing and holds a closed scroll in his right hand, possibly the indictment against the soul, while from his other hand proceeds an open scroll with an inscription which is not very clear, but seems to be "*Nam quo deest tu facias tui bonū esto;*" though it is not very easy to give a satisfactory interpretation if this reading is correct. It seems to be in the nature of a reply given to the indictment prepared by Satan against the soul which is being weighed, "*Be it so, for in so far as it is wanting thou mayest count this to thy advantage.*" It is noticeable that the dexter scale is suspended by a longer chain to the beam than the sinister, denoting thereby that, as is usually the case, the good deeds are outweighing the evil ones.

On the opposite (dexter) side of the cross is another group, namely, St. Peter receiving four figures who have safely passed through the ordeal of soul weighing. St. Peter is very richly attired in full ecclesiastical vestments and with triple papal tiara. He holds a large key in his hand, and is receiving the four figures at the gate of Heaven, from which he is separated by the former sculptured effigy of the Virgin. These figures are all naked, but are distinguished by crowns, a mitre, and a cardinal's hat, as a king, queen, bishop, and cardinal. All have their hands raised in adoration; the cardinal and queen are advancing to join the other two. The flesh tints are very delicate and perfect, and this fact is worthy of notice in respect to all the nude figures represented in the various portions of the painting.

On the dexter side of the picture, behind the former figure of the Blessed Virgin, are the heavenly mansions, portrayed by a castellated building, with an oylet and other small window openings. There are two doorways, approached by steps, at each of which an angel is admitting a nude figure. The upper portion of this part of the picture has unfortunately been destroyed to make way for a stove-pipe, inserted some years ago. The trumpet of the angel calling the blessed to judgment can, however be discerned above.

On the sinister side and behind the former figure of St. John are the jaws of hell, portrayed, as is commonly the case, by the head of an immense fish, with large eyes, fangs, and a swine's snout. On the head is seated a hideous demon, with beak and tail, blowing a ram's horn or twisted trumpet. Within the jaws is a black demon, with monster ears, seizing the leg of a nude prostrate figure with dark hair and dragging him in, while eight more figures, one at least a female, are encircled by a pale red chain, probably suggestive of its being red hot, and are being forced by a brown, long-eared demon with a pronged fork into the terrible abyss. The two outer figures have their hands clasped, and are gazing at their divine Judge in attitudes of the deepest despair. Above them a red demon is bearing a female, head downwards with her legs over his shoulders, towards the mouth of hell. She is perhaps intended to typify either "Luxuria" or "Superbia," more probably the latter, as in a somewhat similar example discovered at the chapel of the Gild of the Holy Cross at Stratford-on-Avon, Superbia is being borne to eternal perdition on the shoulders of a similar demon. At St. Michael's church, St. Alban's, in the Doom picture discovered there, is a nude female figure borne aloft on the shoulders of a demon. She has a tankard in her hand, and a can behind her back, and is intended to represent "Ebrietas," as symbolised by the merry ale wife. So again in the example at Yaxley, in Suffolk,<sup>a</sup> Luxuria is clearly depicted as being carried off, and alluring a young man, who is following her. At Gawsworth, Cheshire,<sup>b</sup> a female figure, probably also designed for one of the Vices, is being conveyed in a wheelbarrow by one of the demons. In the west window at Fairford church,<sup>c</sup> a female is being similarly transported, and a man is being carried head downwards over the shoulders of a demon. All the figures of this group at Wenhaston have black or moderately dark brown hair, nor is there a single figure in any of the groups depicted with the golden hair, which we are accustomed to meet with in most of the mural paintings in our English churches.

On the sinister side of the picture are five figures rising from their graves. One is almost mixed up with the group of the condemned, while above are two more, one naked and rising from a tomb, and another still enveloped in grave clothes, possibly intended to portray some person recently deceased. The other

<sup>a</sup> *Journal of the British Archaeological Association*, xxvi. 248. *Ecclesiologist*, xxviii. (xxv. New Series), 369.

<sup>b</sup> *Historical Antiquarian Notes on Gawsworth Church, near Macclesfield, &c.*, by Joseph F. A. Lynch. W. H. Massie, *The Paintings in Gawsworth Church*. *Earwaker, East Cheshire*, ii. 575. *Archæological Journal*, ix. 102. *Historic Society of Lancashire and Cheshire*, iv. 59.

<sup>c</sup> Rev. J. G. Joyce, *The Fairford Windows*, page 121.



two are rising above the group of the soul-weighing. All are facing towards the cross, and are in varied attitudes of adoration. In most of the pictures of the Doom the saved are represented as rising on the dexter, the lost on the sinister side, and in many cases the difference in their sensations is clearly defined, but this rule seems hardly to apply in the example under notice, as the attitudes and expressions of the several figures seem rather to indicate hope than despair, and they all appear to be regarding with reverence and humility the Divine Judge, before whom they are about to appear.

On various parts of the picture are blotches of vermilion colouring and faint traces of a text, presumably laid on when the painting was obliterated in accordance with the order issued in 1549. Below the rood-beam a text was found and is still preserved. It is probably of the reign of Queen Elizabeth, and certainly of early character, though the particular version of the Bible from which it is taken has not yet been identified. It runs as follows: "Let every soule Submyt him selfe unto the authorytye of the hygher powers for there is no power but of god The / Powers that be are ordeyne<sup>d</sup> of god but they that reseat or are againste the ordinaunce of god shall receyve to them selves utter / damnacion For rulers are not fearefull to them that do good but to them that do evyll for he is the mynister of god." At the end is some red lettering obliterated, but probably giving the reference to the text, which is taken from the Epistle of St. Paul to the Romans, chapter xiii. verses 1-4.

Such is a brief narrative of this most interesting discovery.

With regard to the panel painting of the Doom there are many points about it which are certainly noteworthy. Although the picture itself does not possess any features which can even be described as unusual in this subject, yet amongst the numerous examples which have been illustrated or described there does not seem to be one which closely corresponds in detail with this Wenham painting. We have here a full representation of all the incidents connected with this great and solemn subject. The details of the several groups are similar to those found in other late examples, but we rarely find so complete an illustration of the traditional circumstances attendant on the second advent of our Lord. With regard to its general treatment there appears to be more merit in the painting than is generally found in works of this character, and it may fairly be asserted that the grouping and attitudes of the various figures are well designed, that the drawing and expression of the individuals is clear and suggestive of the feelings by which they are severally actuated, and that the colouring is delicate, and the various tints are so employed as to produce a rich and harmonious effect. No doubt the

representation is crude and realistic according to our modern ideas, but this circumstance should not be made an excuse for not restoring the painting to the church when the works in the nave have been completed.

As to the date of the picture there can be but little diversity of opinion, although, as is usual in these cases, a much greater antiquity has been assigned to it than the details can possibly warrant. The general treatment of the subject, the architecture of the heavenly mansions, and such distinctive features as the tiara of St. Peter, and the crowns, mitre, and cardinal's hat, of the figures in the group with him, all prove the work to be not earlier than 1500 or quite the end of the fifteenth century. The fact that we have no golden-haired maidens and that the more delicate colours employed, especially the flesh tints of the various nude figures, are still in such good condition also proves the late date, and even suggests that the painting could only have been completed and placed in its position a very short time before the sweeping changes effected by the Reformation, when no doubt, in common with other superstitious pictures, it was carefully whitewashed over. As has been pointed out, considerable alterations were carried out in the church early in the sixteenth century, the nave-roof, windows of the nave and aisle, and probably the south porch and doorway, being of this period, so that it may be reasonably assumed that this panel was presented to the church at the same time.

It may also be fairly supposed, though this is merely a conjecture which can neither be verified or disproved, that it was executed at the cost, and perhaps even by the hand of one of the monks of the neighbouring priory of Blythburgh, to which the advowson of Wenhaston church belonged.

Most of the works of this kind in England are so English in their design and treatment that it seems unfair and unprofitable to compare them critically with the no-doubt more artistic productions of the great masters of the Italian or other renowned schools of the same period.

In conclusion, attention may be drawn to some of the peculiarities in the panel before us. First, we do not often find St. John the Baptist introduced so prominently in connection with this subject. In all the more important examples the Blessed Virgin is present interceding on behalf of mankind, and in many we find the beloved apostle and evangelist St. John, but there are only a few other and these late instances where St. John the Baptist thus occurs. He appears in the representation of the Doom at St. Michael's church, St. Alban's, at Trinity church, Coventry, at the Gild of the Holy Cross chapel, Stratford-on-Avon, and in the well-known instance in old glass at Fairford church.



The next point to note is the exceedingly rare combination of the holy rood with the subject of the Doom, and here again only three other cases can be cited at all parallel to the one at Wenhaston. They are at St. Michael's, St. Alban's, the Gild of the Holy Cross chapel at Stratford-on-Avon, which have both been already referred to as containing many points of resemblance with the treatment of our painting, and Poslingford church, Suffolk. At St. Michael's, the painting, partly on panel and partly on the wall, was discovered in 1808, and a careful drawing is fortunately preserved in our Society's library. In the centre is a large cross bearing the form of our crucified Saviour crowned with thorns, and on either side and mixed up with the main subject are portrayed the Blessed Virgin and St. John the Baptist. In the instance at Stratford-on-Avon are the outlines of the cross below the painted figure of Our Lord in Judgment, and of the Virgin and St. John on either side. These have been sculptured as at Wenhaston, and the corbels supporting the beam in which they were fixed are clearly shown in the illustration in Fisher's work on the allegorical and other paintings discovered in the chapel. At Poslingford, a plaster partition with a representation of the Doom was discovered in 1881. The lower portion, in the centre of the picture, had a diaper of alternate bands of roses and lilies, and was painted red, white, and blue, to form, as is supposed, a background for the holy rood.

The last and most noticeable feature is the fact of this subject of the Doom being painted on panel, and not, as was almost invariably the case, on the wall itself. It certainly occupied that situation at the east end of the nave, no doubt almost always selected on account of its prominent position, and of the distinction between the chancel and the nave, for the representation of this important doctrine, and it may be a question, which may be elucidated by documentary evidence, as to whether there may not have been many more similar panel paintings in pre-Reformation times. It may, at any rate, be remarked that the few examples which have been discovered are all of late date, and have chiefly been found in churches where either there was no chancel-arch, or the space above the chancel-arch was insufficient for a proper pictorial representation of this great and solemn subject.

The example at St. Michael's, St. Alban's, has already been more than once referred to. The chief portion of the picture was delineated on the wall above the chancel-arch, but the lower part was painted on a panel filling up the space between the screen and the arch. This is still preserved, and shows several figures rising from their graves, and the lower part of the cross forming the central feature of the holy rood. At Warlingham, in Surrey, a panel was

found on which some angels were brought to light, and their attitudes suggest that they were adjuncts to a picture of this subject. So again at Ellingham church, Hampshire, the whole space between the rood-screen and the roof is filled up with a large partition whitewashed over and decorated on its western side with the royal arms of Charles II. and texts from the Geneva bible and date 1671. In places, however, where the surface has fallen away, traces of figures of angels have appeared, and it is more than probable that an important example of this subject is still concealed beneath the whitewash.<sup>a</sup> During the restoration of Poslingford Church, Suffolk,<sup>b</sup> a plaster partition filling up the chancel-arch was discovered in 1881, on which was depicted the Doom. On the upper part is a figure of Our Lord seated on the rainbow, with the body bare, and no doubt the wounds represented on the side, hands and feet. An angel on his left holds the cross, and another on his right the reed or spear. On each side is an angel blowing a trumpet, and on the dexter side a scroll with the words "Venite ad judicium." Below are the heavenly mansions with domes, nimbed figures in attitudes of adoration, and two more rising from the tombs. On the sinister side a group of figures, a king and bishop among them, are being dragged by a chain to the jaws of hell, while one large figure is standing up in the attitude of adoration. The lower part of the central portion has a series of alternate bands of roses and lilies, and has, as has already been suggested, been thus painted to form a background to the holy rood, which hung or stood immediately in front of it. This panel was unfortunately destroyed through the carelessness of a workman, but drawings of it were made by Mr. Colpoys, from which an illustration is given in the journal of the Suffolk Institute of Archæology. A very interesting panel painting still remains at Mitcheldean church, Gloucestershire.<sup>c</sup> It fills up the space over the chancel-screen, and is divided into eight panels, the Doom occupying the four upper ones, while below are (1) the Betrayal and Christ before Pilate; (2) Christ crowned with thorns and the Scourging; (3) the Descent from the Cross and the Entombment; (4) The Ascension. The date assigned to this is of the time of

<sup>a</sup> At Bushey church, Hertfordshire, there is no chancel arch, and the space between the rood-beam and roof is similarly filled up with a large partition plastered over, and with the royal arms of Queen Anne and some decorative painting on the western face. Here, too, a representation of the Doom may perhaps be concealed.

<sup>b</sup> *Proceedings of the Suffolk Institute of Archæology*, viii. 242.

<sup>c</sup> *Gentleman's Magazine*, ci. part ii. 409. *Transactions of the Bristol and Gloucestershire Archæological Society*, vi. 262. Blackburne, *Decorative Painting*, 20 and 73.

Edward IV. or *circa* 1480. At Enfield church, Middlesex,<sup>a</sup> a panel painting was discovered in 1777 behind the altar-piece during some improvements to the church. A drawing was fortunately made of it, as it formed part of the builder's perquisites, and consequently was taken out of the church and transferred to private hands. It depicts the lower part of a Doom, 12 feet in length by 6 feet in height, and consists of several panels, which had been arranged without regard to their proper position in the original picture. The mouth of hell appears on the sinister side, and there are several figures rising from their graves, a group of the saved advancing towards the heavenly mansions, and of the condemned encircled by a chain being dragged towards the jaws of hell, though the panel on which these are portrayed had been placed on the other side of the picture. All the figures are nude, and their rank marked, as usual, by crowns, mitres, or other distinguishing characteristics. A portion only of the figure of St. Michael weighing souls remains. The date 1531 has been assigned to this painting, which, though less elaborate, has many points corresponding closely with the treatment at Wenhaston.

The latest and best known panel-painting of the Doom is the one still preserved in the triforium of Gloucester Cathedral, of which an illustration and exhaustive account by Mr. George Scharf, F.S.A., appears in *Archæologia*,<sup>b</sup> This painting is a very elaborate one, but it is supposed to be of post-Reformation date, and differs in many essential particulars from the Wenhaston example. At the church of Llandanwg, in Merionethshire,<sup>c</sup> the timber roof of the chancel is also decorated with a representation of the Doom.

These, it is believed, are all the examples which can be brought forward to illustrate this interesting and rare example of medieval art. It is to be hoped that it may be shortly replaced in Wenhaston church, as a practical memorial of the crude religious sentiment prevailing during the early portion of the sixteenth century.

There can be no question that the subject is eminently suitable for the situation in which it was found, though it may possibly be contended that the treatment is too realistic to accord with our more modern refinement of ideas. Still, such

<sup>a</sup> *Gentleman's Magazine*, xciii. part i. 621. Robinson's *History of Enfield*, ii. 8.

<sup>b</sup> xxxvi. 370.

<sup>c</sup> Neale and Webb, *Durandus, the Symbolism of Churches*, ed. 1893, p. 46. J. M. Neale, *Hierologus*, p. 295. *Archæologia Cambrensis*, 3rd series, ii. 173.

all-important doctrines cannot be too plainly exemplified, especially in our churches, and, as in the past so now, we shall be none the worse for having plain truths brought before us in a practical manner by direct illustration of the teaching intended to be enforced. The excellent state of preservation of the painting also particularly justifies its retention, and it is to be hoped that when restored to the church it may often form the theme for a stirring discourse to the churchgoers of Wenhaston in time to come.<sup>a</sup>

<sup>a</sup> The panel has been replaced in the church, and is now fixed against the west wall of the nave above the tower-arch. This is no doubt the best and safest position for it, as since the insertion of the new chancel-arch it was impossible to restore it to its original situation.

VIII.—*The Burial-place of the Slavonians in North Stoneham Church, Hants, by the Very Reverend GEORGE WILLIAM KITCHIN, D.D., F.S.A., Dean of Winchester.*

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Read January 19th, 1893.

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THE village of North Stoneham, not far from the Eastleigh railway junction, eight miles from Winchester and four from Southampton, stands, as the name denotes, "Ad Lapidem," at one of the milestones on the Roman road from Winchester to the waterside at Clausentum. The parish church has somewhat higher architectural pretensions than is usual with the simple Hampshire village churches; it has a nave and two aisles running the whole length of the building, but no structural chancel; it is almost a square, with a low fifteenth-century tower at the west end.

In the north aisle of this church, says Mr. Duthy,<sup>a</sup> was the original burying-place of these Slavonian strangers; for the great ledger-stone, "a slab of polished foreign stone," as Mr. Shore of the Hartley Institute calls it, which covered their remains, apparently lay in his time (1839) in that aisle. Since the date of Mr. Duthy's book, it appears to have been removed to the middle of the church, just in front of the altar-rails. The north aisle had been given up to the Fleming family, the squires of the parish.

The rector, needing space for his choir, has lately boarded over the area in which the stone rests with a wooden floor; he has, however, kindly enabled me to get a rubbing of it, taken between the joists, after the planks of the floor had been removed for the purpose.<sup>b</sup>

The stone is 6 feet 8 inches by 3 feet 7 inches, and so incised as to imitate a

<sup>a</sup> The passage in Duthy runs thus: "On the pavement of the north aisle is a large stone, having round an eagle displayed the words SEPULTURA DE LA SCHOLA DE SCLAVONI AÑO DNI MCCCCLXXXI. The import of the inscription has not been ascertained. It has been suggested, however, that it may point out the burial-place of a Slavonian named *De La Schola*, and that the arms may have been intended to designate his nation." *Sketches of Hampshire*, p. 396.

<sup>b</sup> By permission of the rector, the Rev. E. K. Browne, M.A., the wooden flooring has been cut through and hinged, so as to lift up to show the stone, at the expense of the Hampshire Field Club. The accompanying plate of the slab is from a rubbing made by Mr. W. H. St. John Hope, when this was done.

brass; round the edge runs an inscription, bordered by parallel lines; and at the angles are quatre foils with the symbols of the four Evangelists; in the middle of the stone is a well-designed shield, charged with a double-headed eagle. (Plate XV.) The inscription runs thus:

SEPVLTURA DE LA SCHOLA DE SCLAVONI ANO DNI . M.CCCC.LXXXXI.

These Italian words, for they appear to be medieval Italian rather than Latin, may safely be rendered as "The burial-place of the gild (or fraternity) of the Slavonians." Duthy, who at any rate saw that there was something interesting here, goes altogether astray in his rendering; for he thinks that "De la Schola" is the name of a person there interred, and explains the spread-eagle as the badge of his nationality, the Slavonian.

The words "Schola de Sclavoni," however, carry us at once to Venice; for there, as Molmenti tells us in his interesting volume,<sup>a</sup> "these *Scuole* were a number of small but powerful republics (guilds, rather, or societies) which put themselves under the protection of some saint, erected buildings of their own, and adorned their churches with pictures by the best artists." These words may be only a generalisation from the one example at Venice; at any rate, it is known that a company or gild of Slavonian seamen had a settlement on the banks of the Grand Canal, at no great distance from St. Mark's. It still bears their name; that district being styled "la riva degli Schiavoni" to this day. Here they had their quay and landing-place, buildings for business, and a chapel of St. George, adorned, at their cost, with a fine scheme of wall-paintings by Carpaccio. This chapel was finished in 1501.<sup>b</sup>

It is said, and I believe rightly, that this *Scuola* was composed of Illyrian or Dalmatian sailors, brought over to Venice at a time when a large part of the Adriatic seaboard was under the dominion of the Republic: they manned the galleys which carried the commerce and the products of the East to all parts of the western world. Flaminio Cornerio<sup>c</sup> says that the Slavonians crossed the Adriatic "in 1451, many being sailors, and determined to found (in Venice) a charitable brotherhood under St. George and St. Tryphon, for the succour of poor seamen and others of their nation, and to conduct their bodies religiously to burial." We have, too, their own declaration on the subject, under date 1452, the year of their arrival in Venice, and the year before the world's catastrophe at Constantinople. Their aim, they say, is "to hold united in sacred

<sup>a</sup> *La vie privée à Venise* (Ven. 1882).

<sup>b</sup> A very interesting and complete account of St. George's Chapel is to be found in Mr. J. R. Anderson's Paper on Carpaccio's works, in the *St. Mark's Rest*.

<sup>c</sup> *Notizie Storiche* (Ven. 1758) 167.





GRAVE-SLAB OF A GILD OF SLAVONIANS, 1491,  
IN NORTH STONEHAM CHURCH, HANTS.

( $\frac{1}{2}$  linear).





bonds men of Dalmatian blood, to render homage to God and His saints by charitable endeavours and by religious ceremonies, and by holy sacrifices to help the souls of the brethren alive or dead." Both these passages point to the same anxiety for the welfare of those of their people who died in foreign lands.

This then is the starting-point of our Slavonians: and our records show that it is just after this time that they appear at Southampton. These Illyrians and Dalmatians have ever been famous seamen: to this day they furnish the best part of the crews of the Austrian navy. They are not Ragusans, for these were Latins, and their "argosies" were not manned with Slavonian crews; on the contrary, a bitter hostility ruled between them and the native people of Illyria and Dalmatia. Venice, on the other hand, had no such feeling, but recruited her ships from every quarter, much as our English merchant-navy is largely manned with Norwegians or with Lascars. It was therefore perfectly natural that, when the east shores of the Adriatic fell under Venetian control, the Slavonian seamen should be transferred in large numbers to the City on the Lagunes.

The next point is, how did these Slavonians come to leave traces of themselves in a quiet Hampshire village? We must, to answer the query, look first into the records of Venetian trade with England; it is plain that if we find a connexion between the Venetian galleys at Southampton and Winchester we shall be on our way to a solution of the problem.

Now, there is plenty of evidence that in the fourteenth and fifteenth centuries the Venetian traders, though they dealt mainly with the wealthy cities of the Low Countries (the convoys were usually styled "the Flanders fleets"), were also in frequent communication with England, through London or Southampton. We find that merchandise sometimes passed up the Thames, and sometimes was landed at Southampton.

This commerce was so great that it enabled the Venetians to send out fleets of considerable size, and the ships acted as a protection to one another. Each vessel, we learn, besides her 180 oarsmen, mostly Slavonians, her pilots, scribes, and craftsmen, musicians and physicians, carried a body of thirty archers for defence; the archers were commanded by four youths of the patrician rank, told off specially for this duty, "in order that the noble youth of Venice may see the world." For the oligarchy knew that their position could not be sustained unless their sons were trained to become familiar with the conditions under which their trade was carried on. The Venetian State Papers show that there was also a need for these skilled fighting-men. Almost on every occasion on which they make mention of visits to Southampton they tell us of unfriendly relations between the crews and the townsfolk. Thus, in 1323, a serious affray occurred. The patrons, merchants, masters, and seamen of five Venetian galleys fought the

Southampton men, and there was bloodshed as well as much destruction of goods. Again, in 1384, there came a Decree from the Senate, replying to a communication from the captain of the fleet, who had asked leave to run over to Southampton to complete his cargo. The Senate tell him that if his council (the masters of all the galleys with the merchants) think good to go to Hampton, he may go; only they beg him earnestly not to let his rowers land, lest there should ensue bad blood and affrays. And, in 1386, we find that "should the captain and the shipmasters deem it too perilous to touch at Hampton, they might forbear." Even when, as in the fifteenth century, in 1451, a Venetian ship is ordered to put ashore at Southampton the goods for Venetian merchants in London, a similar anxiety is shown. So that a state of ill-will and angry jealousy appears to have existed all through these two centuries.

After the middle of the fifteenth century the resort of the galleys to Southampton became far more frequent. For troubles in London, political and commercial, made that city very unsafe for the Italians. Sir James Ramsey, in his lately published volume, entitled *York and Lancaster*, refers to these London disturbances, and their effect on Italian trade. These troubles, in fact, caused the transfer of the whole commercial business between London and Venice to Southampton and Winchester. This took place in 1456, 1457. "About the end of April (1456)," he writes, "serious disturbances broke out in London, probably in connexion with the attempt to prohibit the sale of foreign silks. The servant of a mercer picked a quarrel with an Italian and assaulted him. The mayor next day, having committed the offender to prison, the entire 'mercery' of the city rose and released their fellow. The houses of several Italians were sacked; foreigners hid themselves, or fled to Winchester and Southampton. The duke of Buckingham was sent into the city with a commission of *Oyer et Terminer* . . . even the king (Henry VI.) was brought into the city to appease the people. On the 5th of May the disturbances rose to such a height that the king was taken back to Westminster . . . By 10th May order was restored, two or three men having been hung. 'The Lombards to occupie the merchandizes as thei dide till the Counsail or Parliament have otherwise determined.'"<sup>a</sup> These troubles brought matters to a head. The Italian traders appealed for protection against the intolerable arrogance and violence of the Londoners; and the Senate, after some delay, issued a decree that "in consequence of insults by artificers and shopkeepers of London" the Venetians, Genoese, Florentines, and Lucchese should henceforth have nothing more to do with the capital. Their trade, however, was too valuable and their spirit too high to be crushed by the

<sup>a</sup> *Fabian*, 630. *Paston Letters*, i. 384.

unmannerly behaviour of the islanders, "*toto disjunctos orbe Britannos*" even in the fifteenth century. They therefore selected Winchester as their headquarters and emporium, with orders that "no Venetian ship should go to London so long as the merchants remain absent;" and, remembering how badly the Italians had fared before the justices in the capital, they added "that the merchants should insist on having at Winchester a judge for all law suits between English and Italians, and between the Italians themselves, so that they may not have to go to London to the Courts." 23rd August, 1457.

This transference of the merchants, with all the machinery of their commerce, to Winchester brings us close to the point of our enquiry, why the Slavonians should have made North Stoneham church their place of sepulture. For Southampton was the port and Piræus of Winchester; and the Italian galleys for half a century regarded that town as the true commercial gate and port of entry for all England. A lively traffic at once converged on that sheltered harbourage; and as a necessary consequence of it, the twelve miles of Roman road, which in those days were the only land connection between the two towns (the river having become too shallow for anything except boats), were thronged with travellers and the rich store of goods from the eastern world. This Roman street issuing forth from the south gate of Winchester follows a straight course southward, through the villages of Compton and Otterbourne; and to this latter place the modern high road runs along the ancient line, as may be seen from its inflexible directness. At Otterbourne, the present highway, bearing slightly to the right, climbs a steep gravel hill, while the Roman street, now almost entirely obliterated, continued in a straight course, passing midway between the present railway and the high road, till it reached the two Stonehams, villages a Roman mile apart. Up and down this street passed the foreign seamen with their loads of merchandise; the Slavonians being as handy and as regularly employed in this work as in that of navigating the Venetian galleys. They even appear to have ventured, more boldly than prudently, to penetrate into the country districts with packs of goods, acting as hawkers and traders on their own account. For we find in 1499 "that a few days before some of the galley-crews were travelling through the country hawking their wares, when about twenty miles from Southampton three of them were attacked by highwaymen, who killed two of the three. The king of England (Henry VII., who was friendly towards the foreign traders, as befitted a prince who had a head on his shoulders), on hearing of the mishap from the captain of the galleys, promptly inquired of it, captured two of the robbers, sent them to Southampton, where they were forthwith hanged."

\* Venetian State Papers, No. 782.

It was for the sake of those who had perished in such a manner or who might have died from natural causes, that the "Slavonian School" set itself to make due provision of a burial-place, according to its declared duty, "to succour the living, and find an honourable resting-place for their dead." And this they appear to have done by getting leave either to build or to take possession of this north aisle of North Stoneham church, at the first halting-ground of their convoys after issuing from Southampton Bargate.

Why should they have pitched on this, rather than on some one of the many churches, apparently so much more handy for them, within the town walls? Clearly because relations were so strained between the Venetians and the townsmen of Southampton, and the dislike felt for the foreigners was so strong, that it would have been very difficult for them to get possession of a church, or even of a portion of a church, inside the walls. And even had they been able to get such a chantry chapel of their own, their tenure of it would have been always most insecure; during their long absences no one would have been left behind to protect their *Campo Santo*; their dead would have been exposed to insult and plunder from the rude islanders. They had no factory at Southampton; it is true that in 1495 one Thomas Oare was their consul in the town; for we learn that he was elected to and confirmed in the office that year; but there is no trace of more than this; and we know that in the orders given from headquarters the shipmen were often forbidden even to land there. Such narrow jealousy on the part of the English, whether in London or Southampton, against men who brought in their train prosperity and plenty, was unreasonable and shortsighted, and did much to quicken the steady loss of wealth and trade which the records of the time deplore in plaintive terms, as if our people were not to a very large extent the causes of their own depression. This jealousy perhaps also explains the fact that as yet no traces of these Slavonians or of the Venetian traffic are to be met with in the somewhat abundant records of the town of Southampton.

Thus debarred from having their chapel in the town, the seamen naturally looked out for some quiet place on their line of route at which they might find a fitting cemetery for their dead. South Stoneham, through which they passed after leaving the town, was probably not available, as it was in the hands of the monks of St. Denys in the suburbs; and they therefore went on a Roman mile, and paused at the other Stoneham. Here they secured what they wanted. It may be that the rector of the parish, who about this time appears to have been engaged in the work of restoration or enlargement of his church, was glad of the substantive aid which the foreigners could give; he may too have made friends with them as they passed through, for Englishmen I suppose are not all brutes, and their offer, in accordance with the rules of their guild, to build or beautify at



their own charges the north aisle of the church was no doubt willingly accepted by the good priest. And so the "Sepultura de la Schola de Slavoni" was established at North Stoneham. The aisle has in it, though much changed since that time, touches of a higher art than is commonly to be met with in Hampshire village churches. Thus, the little figures which stop the mouldings round the head of the east window of the north aisle (if, indeed, they are in their original position, which does not seem to be quite certain) are full of life and vigour of treatment.

The work done by the Slavonians, whatever it may have been, in the interior of this aisle, has all disappeared. Still, we may be sure they gave much heed to it. They may have brought over, in those brightest days of Venetian art, some rich picture as an altar-piece, from which as they worshipped they drew sweet memories of the sunny mistress of the Adriatic, their adopted home.

The records of North Stoneham make no reference to these picturesque strangers; they have vanished as completely as the Roman road along which they passed.

That they really needed some such burying-place is clear; many were the perils they faced in coming to England. They had to bear the illwill of Southampton; in the open country were hungry and savage highwaymen; the Wars of the Roses had filled the land with lawless folk; maladies, engendered by rough living aboard and ashore were rife, and went under the convenient general name of the Plague; even the seacoasts were infested with freebooters. Only three years before the date of our ledger stone, the Venetian State Papers (No. 547) provide us with an example of these dangers: "On Christmas Day (1488) while the Doge and the Ambassadors were at session in St. Mark's, came letters from London addressed to Giovanni Frescobaldi, the Florentine money-changer and usurer, under date of Nov. 3rd, wherein it was set forth that the Flanders Galleys, Piero Malepiero, captain, which had sailed out from Antwerp for Hampton on Oct. 26, when off St. Helen's were accosted by three ships, which bade them strike sail. The galleys, seeing they were English, drew nigh, saying they were friends; whereon the English tried to board the galleys; but Piero blew his whistle and beat to quarters, and so drave off the assailants, slaying eighteen of them. The English however chased them into Hampton harbourage. Then Piero wrote to the King of England to deprecate his anger; and Henry sent down to him my Lord of Winchester (Bishop Peter Courtenay), who bade him have no fear; that those who had been killed must bear their own loss; and that of a truth a *pot de vin* (a gratuity) would settle the whole affair."

One thing about the ledger-stone is a puzzle, the very thing which ought to have thrown light on the Slavonians. This is the shield with a double-headed eagle. Yet it is altogether uncertain to whom it points. In these days the

cognisance makes us think of the Holy Roman Empire and Maximilian the Penniless. In the Nuremberg Chronicle, then just issued, there are plenty of these uncanny birds. In fact, in 1491 it might, in point of time, indicate allegiance to the empire; on the other hand, it is certain that no Slavonians would have at that day acknowledged any such lordship. And besides, the double-headed eagle was then more properly Slavonic than Germanic. "This eagle," says Mr. T. Graham Jackson, A.R.A., in a letter in reply to an enquiry I made of him, "was the badge of the Nemagna dynasty of Servia, who usurped the throne in 1150, and ruled till the fatal day of Kossovo in 1389. The Servians never had a fleet, because, like the King of Bohemia with the seven castles, they never had a seaboard. The double-headed eagle is now borne by the Prince of Montenegro, who aspires to represent the old empire of Stephen Dushan. But they only date from Kossovo, or rather from 1516, so far as the present dynasty is concerned, and of course they never had any seaport till the treaty of Berlin the other day. Austria cannot have anything to do with it. She had no footing in Dalmatia till the treaty of Campo Formio, and never even appears in Dalmatian history."

I cannot help thinking that these poor seamen, feeling quite unprotected in England, knowing that this eagle was a true Slavonian badge, though not properly theirs, and finding that in those days it was very much respected in England, as connoting in English minds the empire under Frederick IV., boldly carved it on their ledger-stone as a protecting symbol.

The use of this little *campo santo* by the Slavonians cannot have lasted long. Changes in the commercial routes, new relations between East and West, the steady downfall of the prosperity of Southampton and Winchester, made it ever less and less tempting for the Venetians to visit England. Ere long the unfriendly shores of Southampton saw the last of our Slavonians. Their fleet set sail thence for the last time on the 22nd of May, 1532; and, though single ships put in from time to time, by the time of Edward VI. "the galleys of Venice and the carreckes of Jeane (Genoa) had altogether ceased to visit that port."

Thus the Slavonians made use of their "sepultura" for only about forty years. After that time this "burying-place to bury strangers in" remained deserted, till in the days after the Reformation, we know not when, it was thrown into the church, and the separate chantry with its altar and ornaments disappeared.

And so ended this dim little episode in the mediæval trade relations between England and the East.

P.S.—Mr. Hope points out that there remain on one side of the stone (*see* Plate XV.) the marks where two large iron rings have been fastened to lift the stone by, as if it covered some vault or common burying-place. The holes for fixing the rings are now filled with lead.



IX.—*On some Iron Tools and other Articles formed of Iron found at Silchester in the year 1890; by SIR JOHN EVANS, K.C.B., F.R.S., Vice-President.*

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Read February 16th, 1893.

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IN the account of excavations at Silchester, given to this Society by Messrs. G. E. Fox and W. H. St. John Hope, in December, 1890, and published in the *Archaeologia*,<sup>a</sup> attention is called to a very remarkable collection of antiquities which were found in a pit in the part of the town known as *Insula I*.

This consisted of a number of iron objects mixed with a few others of different material. At a depth of five feet from the surface lay a sword-blade, broken in two, and two iron bars, but below these was found a mass of nearly sixty iron articles, which it is the object of the present paper to describe at somewhat greater length than could be afforded in an account dealing with the whole of the discoveries made during a season's excavations.

The authors, however, called attention to most of the principal forms of tools and instruments, and in the list they gave mentioned two files, which on further examination appear more probably to have been chisels, while, as was perhaps unavoidable, some other forms were passed by unnoticed.

They also called attention to the closely analogous find of no less than ninety-six iron articles, many of them identical in form with those from Silchester, which was made by the late Lord Braybrooke, in 1854, at Great Chesterford, in Essex. An illustrated account of this discovery is given in the *Archaeological Journal*,<sup>b</sup> to which I shall have frequent occasion to refer.

<sup>a</sup> Vol. lii. p. 742.

<sup>b</sup> Vol. xiii. p. 1.

The authors regarded this as the only other discovery of the same kind that had been made in Britain, and possibly the iron tools found at Kingsholm, Gloucestershire, and figured by Lysons<sup>a</sup> in his *Roman Antiquities* discovered in that county, did not constitute a hoard. The objects, whether found together or not, are now in the British Museum.

The discovery of some smaller deposits has also been recorded, such as that at Bigberry<sup>b</sup> Hill, near Canterbury, whence the late Mr. John Brent obtained a plough-share, a coulter, and a cattle-goad, and subsequently four iron sickles or bill-hooks, several rings, part of an iron rod, and other objects, all associated with Roman remains.

In France a considerable number of iron tools of the Roman period have been discovered, and notably an extensive series of carpenters' and builders' tools, near Saumur, and preserved in the museum of that town. Many of these have been figured by Liger.<sup>c</sup>

The numerous iron instruments found at Hod Hill, Dorset,<sup>d</sup> belong to the late-Celtic rather than to the Roman period; at that place some seventeen swords, with a kind of socketed hilt, were found, while at Bourton-on-the-Water,<sup>e</sup> Gloucestershire, in 1860, no less than one hundred and forty-seven such blades were found together. The sword from Silchester is of a different character, having a plain tang for the hilt, and in general appearance much resembling the ordinary swords from Saxon cemeteries, such, for instance, as those from Ozingell.<sup>f</sup>

*Sword.*—The blade (fig. 1), now broken in half, is  $25\frac{1}{2}$  inches long. It is

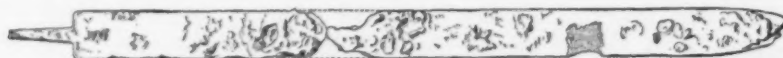


Fig. 1. Sword-blade.  $\frac{1}{2}$ .

double-edged,  $1\frac{3}{4}$  inch wide at the hilt and tapering to about  $1\frac{1}{2}$  inch at three inches from the point. It has a tapering tang to go into the hilt, which is  $\frac{5}{8}$  inch wide, where it joins the blade so as to leave a square shoulder on either side. Near the tang on one face of the blade is what may be a maker's mark somewhat like the numerals VII.

Besides the two iron bars that lay with the sword was a third at a greater depth, which formed part of the more extensive deposit.

<sup>a</sup> *Reliquiæ Britannico-Romanæ*, ii. Pl. XI.

<sup>b</sup> *Collectanea Antiqua*, vi. 262.

<sup>c</sup> *La ferronnerie*.

<sup>d</sup> *Collectanea Antiqua*, vi. 1.

<sup>e</sup> *Proceedings of the Society of Antiquaries*, 2nd S. i. 234.

<sup>f</sup> *Collectanea Antiqua*, iii. Pl. II.

One of these bars (fig. 2) is perhaps the longest object found. It is 3 feet



Fig. 2. Axle (?).  $\frac{1}{4}$ .

$\frac{3}{4}$  inch in length, but has the appearance of being unfinished. It is indeed much like a portion of an axle of a carriage roughly forged. At one end it is conical and tapers from  $1\frac{1}{4}$  inch to  $\frac{3}{4}$  inch in a space of little more than 6 inches. Then comes a collar 2 inches square and  $\frac{1}{2}$  inch wide, beyond which the bar is about  $1\frac{1}{4}$  inch square for a distance of about 7 inches, it then becomes round and about  $1\frac{1}{4}$  inch in diameter, but for a few inches at the end is drawn down flat on each side as if for some other pieces to be welded on. The whole bar shows some signs of having been originally two flat bars welded together.

The two other bars of iron appear both to have been forged for the same purpose, but what that purpose was is very uncertain. One of them is 2 feet  $6\frac{1}{2}$  inches long, for about 1 foot 6 inches, made from a bar nearly an inch square, on which another bar 1 inch by  $\frac{3}{4}$  inch has been welded, the weld being quite visible. At one end three sides of the bar have been more or less rounded and brought to a blunt point somewhat like the end of a boat. The other end appears to be unfinished, but gradually tapers in thickness.

The other of these two bars is 2 feet  $5\frac{3}{4}$  inches long and of much the same general character. At a foot from the pointed end it is  $1\frac{1}{2}$  inch by 1 inch bare. From a point about a foot from the other end it is gradually reduced both in width and thickness, the end itself being left truncated. It is hard even to suggest a purpose for these bars; they may, however, have belonged to some form of scarifier, harrow or *irpex*. In the Chesterford deposit were five bars, varying in length from 2 feet 2 inches to 2 feet 6 inches, of iron  $1\frac{1}{4}$  inch by 1 inch and tapering to a point at each end. From the figure given by Lord Braybrooke,<sup>a</sup> they seem to have been almost identical with the Silchester examples. He offers no suggestion as to their use.

In addition to the bar already described, the objects of which the principal deposit consisted were—anvils of three kinds, axes, adzes, hammers, tongs, chisels, gouges, a kind of file, a plane, a horse-shoe, a lamp, and a gridiron. On all of these it will be well to say a few words, though the classification of the tools must be somewhat arbitrary as they are such as were used by workmen of various

<sup>a</sup> *Archaeological Journal*, xiii. Pl. II. fig. 17.

trades, blacksmiths, husbandmen, carpenters, coopers, shoemakers, cooks, and possibly others.

*Anvils.*—Of these three kinds were found, the one much like those in common use by blacksmiths at the present day, the other two of less well-known types.

Of the first kind but one example occurred (fig. 3). Its face is nearly flat, about  $14\frac{1}{2}$  inches in extreme length, its greatest breadth being about  $2\frac{1}{2}$  inches.



Fig. 3. Anvil.  $\frac{1}{2}$ .

One end forms a conical beak while the other is as usual flat. The face of this latter is somewhat depressed, possibly by hard wear. It is rounded at the end, toward which it slightly tapers. The stem of the anvil, which was probably received by a wooden block, is about  $10\frac{1}{2}$  inches long, and tapers from about 2 inches square at the top to about  $1\frac{1}{4}$  inch square at the bottom. The total weight is  $20\frac{1}{2}$  lbs. Many of the earlier forms of large iron anvils seem to have had no beaks, though some of the small bronze anvils of the Bronze Age are provided with them. An anvil with a single beak is figured on a gem.<sup>a</sup>

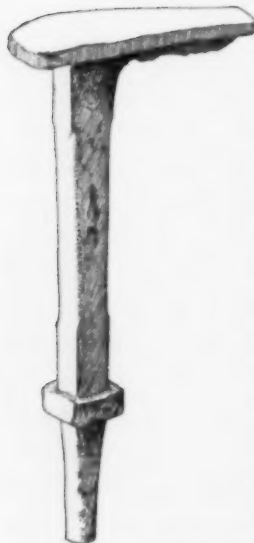


Fig. 4. Shoemaker's Anvil.  $\frac{1}{2}$ .

Two anvils of a second kind were present. These are of a different and lighter character, and of a form still in use by shoemakers, having a flattish sole-shaped face supported on a long stem. In the larger of the two this face is about 6 inches long, tapering from about 2 inches to 1 inch in breadth, and somewhat rounded at each end (fig. 4). The part forming the face is about  $\frac{1}{4}$  inch thick, but it is strengthened by flanges at the edges on the lower side, and by a central support about  $\frac{3}{8}$  inch deep, branching from the stem. This stem is in all about  $11\frac{1}{4}$  inches long,  $1\frac{3}{8}$  inch by  $\frac{3}{4}$  inch in section at the top, and 1 inch by  $\frac{3}{4}$  inch where it starts from a square collar  $1\frac{1}{2}$  inch by  $1\frac{1}{4}$  inch, and  $\frac{1}{2}$  inch wide, which prevented a projecting tang  $2\frac{5}{8}$  inches long from being driven too far into some wooden support. The tang is rounded towards the end, and the central part of the stem has also its angles rounded.

<sup>a</sup> Blümner, *Technologie*, vol. ii. p. 189 a. Smith's *Dictionary of Antiquities*, 3rd ed. s. v. Incus.

The face of the smaller anvil is about  $5\frac{3}{8}$  inches long, tapering from  $1\frac{1}{2}$  inch to 1 inch, with rounded ends. The stem is about 9 inches long with a strong arm proceeding from it to support the face. At the top it is about  $1\frac{1}{8}$  inch by  $\frac{7}{8}$  inch in section, tapering to about  $\frac{7}{8}$  inch by  $\frac{3}{4}$  inch at  $2\frac{1}{2}$  inches from the end. From this point it is drawn down with a slight shoulder into a wedge-like tang to fix in wood. This form of anvil appears to have been unknown to Blümner.

Of the third class of anvils there are no less than four specimens, varying in total length from about  $10\frac{1}{2}$  inches to 7 inches. The principle on which they are constructed is the same in all. A piece of iron, rather more or less than an inch square, has been drawn down to a point at one end, the other being left flat, and the angles flattened so as to give that end an octagonal or nearly circular form. At about a third or a quarter of the total length of the iron from the top, or just about at the spot where it begins to be drawn down towards the point, a hole has been punched through the square part of the bar. Through this, in three cases, two pieces of flat iron, and in one case one only, have been passed, and the ends projecting beyond the bar have then been coiled, so as to make rings or spirals, which form brackets at right angles to the principal stem. The pieces of iron thus inserted are usually about  $\frac{1}{2}$  inch wide and from  $\frac{1}{8}$  inch to  $\frac{1}{4}$  inch thick, and the rings or spirals formed by coiling them are from  $1\frac{1}{2}$  inch to 1 inch in diameter, their depth being the width of the iron, or about  $\frac{1}{2}$  inch. There was at first a difference of opinion as to the purpose which these instruments were intended to serve, some persons having regarded them as tent-pegs, but it was soon recognised that they were anvils. This was shortly afterwards conclusively confirmed. Mr. J. A. Jones, of Gijon, near Oviedo, Spain, obligingly sent over two small anvils of the same kind, which he described as being in daily use in Spain by the farmers and mowers, on which to beat out the edges of their scythes. They are constantly used in the province of Asturias, and are made in large quantities at a factory at Toledo. Our Fellow Mr. Frederick Davis says that such anvils are also in use in the north of Italy, and has kindly sent us a specimen made on the same principle as those from Silchester, and now regularly shipped from Birmingham to the Spanish settlements of South America.

Mr. Thomas J. Jeakes also pointed out in *Notes and Queries*<sup>a</sup> the true use of these objects, and cited the use of "enclumettes" of the same character in Burgundy.

<sup>a</sup> January 31, 1891, 7th S. xi. p. 81.



Fig. 5.  
Mower's Anvil.  $\frac{1}{4}$

The principal difference between the old and the new form is, that the proportions of the stem above and below the brackets have been reversed, the tapering part in the modern examples forming only about one-third of the total length instead of two-thirds. This brings the face of the anvil higher above the ground, say 7 inches instead of 3 or 4 only, and no doubt adds to convenience in use. The manner in which these anvils are fixed is by driving the spiked end into the ground, and at the same time placing stones or other supports under the brackets to prevent them from going down farther into the earth. In my *Ancient Bronze Implements*,<sup>a</sup> I have, on the authority of the Rev. W. C. Lukis, F.S.A., mentioned the use in Brittany of iron-tipped stakes, which, when driven into the ground, form convenient anvils on which to hammer out the edges of sickles, and have called attention to the fact that in England a small anvil to cut and punch upon, and on which to hammer cold work, is still called a "stake."

Among the Roman antiquities of iron discovered at Great Chesterford, Essex, in 1854, and described by the late Lord Braybrooke,<sup>b</sup> were five of these instruments, which he terms "anvils or anvil-pegs." Three of them were 9 inches and two 11 inches in length, and all had loops, one on each side, projecting from 1 to 1½ inches horizontally. Another of the same kind, but without loops, had been found in the same neighbourhood, and had been termed a "gate-anvil." It is to be observed that in the Chesterford hoard no less than twelve scythes were present. An example of an anvil of the same kind has been engraved by Liger<sup>c</sup> as a mower's anvil, "*enclume de faucheur*," "*laquelle est absolument semblable à celles dont on se sert de nos jours*."

*Plough-coulters*.—Of these two were found, both of very heavy fabric. The total length of one is 2 feet 2¾ inches, that of the other, which has lost a part of its point, must have been fully 2 feet 4 inches (fig. 6). The stem of each has been



Fig. 6. Plough-coulter. ½.

formed of iron about 1¼ inch square, with the angles chamfered. The blade part of the smaller is 8 inches long and 3 inches wide at the top, that of the larger has been rather shorter, but nearly ¾ inch wider. They weigh 8½ lbs. and 10 lbs.

<sup>a</sup> p. 181.

<sup>b</sup> *Archaeological Journal*, xiii. p. 1.

<sup>c</sup> *La ferronnerie*, ii. 103.



respectively. Five even more ponderous coulters, weighing from 14 to 16 lbs., and from 2 feet 3 inches to 2 feet 11 inches long, were in the Chesterford deposit. The stems of two were octagonal,  $1\frac{3}{4}$  inch in diameter; those of the other three were 2 inches square.

The plough-shares in Roman times in Britain seem generally to have been made of wood tipped with iron. Some form of wheel-plough appears to have been known, and possibly the next object described may have belonged to a plough-wheel.

*Axle-box (?)*—A sort of ferrule made of thin iron, about 4 inches long and 2 inches in diameter, may have served as an axle-box (fig. 7).

At the ends the metal has been hammered over outwards, so as to form a flange to keep the box in its place.

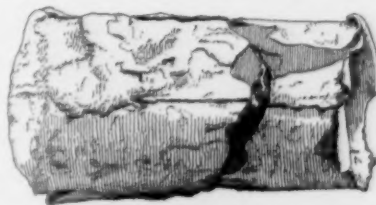


Fig. 7. Axle-box (?).  $\frac{1}{4}$ .

*Hammers.*—Of hammers there are three, all somewhat different but resembling each other in being slightly curved so to form an arc of which the haft was the radius. They all have a nearly circular and flat face at one end, and a transverse semi-cylindrical one at the other. This is at right angles to the haft so that they are what is technically known as "cross-paned."

The heaviest weighs  $34\frac{3}{4}$  ounces avoirdupois, and is nearly 7 inches long. The flat face is about  $1\frac{1}{4}$  inch in diameter and the other  $\frac{7}{8}$  inch wide (fig. 8). The hole for the haft is in the middle of a lozenge-shaped expansion, about  $2\frac{1}{4}$  inches from angle to angle, and is circular, tapering from  $\frac{5}{8}$  inch on the inner face to  $\frac{1}{2}$  inch on the outer. In any section both the inner and outer faces of the head are comparatively flat and the sides rounded.

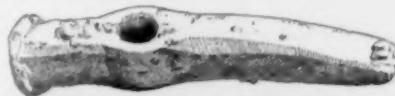


Fig. 8. Hammer-head.  $\frac{1}{3}$ .

The next head, about 6 inches long, weighs  $33\frac{3}{4}$  ounces, but the socket for the haft is filled up with apparently a piece of iron. The striking face is more octagonal than round, and is about  $1\frac{3}{8}$  inch across. Some of the oxidized iron has scaled off, and there is every appearance of the face of the iron hammer having been "steelled" by having a thin plate of steel welded on in precisely the same manner as that now usual in the making of hammers. The "pane" end is  $1\frac{1}{4}$  inch wide, the rounding being about  $\frac{1}{2}$  inch in diameter, as is the case with the other just described.

The third hammer-head is somewhat lighter, 22 ounces, but is fully  $6\frac{1}{2}$  inches long. The face has been much spread by use, and is now about  $1\frac{1}{2}$  inch across,



though originally only an inch (fig. 9). The other end is about  $\frac{7}{8}$  inch wide.

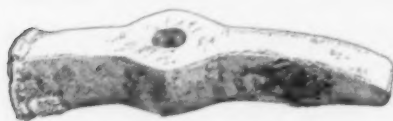


Fig. 9. Hammer-head.  $\frac{1}{4}$ .

The shaft hole is partly blocked with rust, but it appears to be nearly of equal size throughout and  $\frac{5}{8}$  inch in diameter.

There were five hammers of much the same form and character in the Chesterford deposit, but though from 6 to 7 inches long

they were of lighter make, weighing from 12 to 28 ounces.

The perforation for the handle seems to have been little more than  $\frac{3}{4}$  inch in diameter. It is indeed remarkable how small the shaft holes in these heavy hammers are, and it is difficult to conceive how any wooden hafts, however tough, not more than  $\frac{3}{4}$  inch across and placed in circular and not oval sockets, can have sufficed for hammers over 2 lbs. in weight. Driving a wedge into the end of the haft to make it tight in the socket would at the same time tend to diminish its strength. The fact that one of the Silchester hammer-heads has its socket completely filled apparently with iron, suggests the possibility of some kind of compound haft of which the iron end went into the socket of the head. Possibly the hafts may have been made of softened hide which was subsequently stiffened by drying.

*Tongs.*—A single pair of tongs was found closely resembling the common blacksmith's tool of the present day. In extreme length it measures  $24\frac{5}{8}$  inches, the rivet that joins the two limbs being  $18\frac{1}{8}$  inches from the end of the longer (fig. 10).



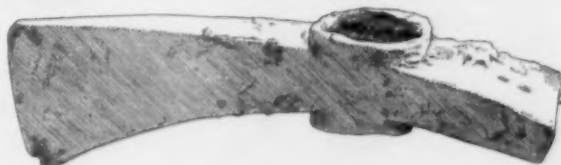
Fig. 10. Pair of Tongs.  $\frac{1}{8}$ .

This limb is about  $\frac{9}{16}$  inch in diameter in the middle, tapering to about  $\frac{5}{16}$  inch at the end, which is rounded. The other limb measures  $16\frac{3}{4}$  inches. It is of the same diameter in the middle as its fellow, and tapers down to  $\frac{1}{16}$  inch at the end, where it expands into a small somewhat conical knob. When the tongs are closed the handles are still  $1\frac{1}{2}$  inch apart.

The grip of the tongs extends  $6\frac{3}{8}$  inches beyond the centre of the rivet. The ends are turned up at right angles for about  $1\frac{3}{4}$  inch, but one of them has a second turn of about  $\frac{1}{2}$  inch in length and overlaps the opposite end. This part of the tool is considerably curved, so that there is a pointed oval opening between the two limbs nearly  $1\frac{1}{2}$  inch wide in the middle. At the hinge they

have a section of  $1\frac{3}{8}$  by  $\frac{3}{8}$  inch, but taper down to about  $\frac{3}{8}$  inch square at the end. A pair of tongs of rather smaller dimensions was found with other tools at Kingsholm,<sup>a</sup> Gloucestershire, and is now in the British Museum. In several ancient representations of tongs on vases and wall-painting one limb of the handle is shown as shorter than the other, as in these examples. Representations of several ancient forms of blacksmiths' tongs are given by Blümner<sup>b</sup> and Liger.<sup>c</sup>

*Axes.*—Of axes eight were found, all of them with curved blades and with an edge at one end and a flat rectangular face at the other, which could be used as a hammer. The longest is 10 inches in extreme length, with an edge  $2\frac{3}{4}$  inches wide and a hammer face  $\frac{7}{8}$  inch by 2 inches. This is  $2\frac{3}{4}$  inches above the eye, which is oval and about  $1\frac{1}{2}$  inch by 1 inch. There is a projecting rim round the eye, which gives it a length of  $1\frac{7}{8}$  inch. Without this rim the blade would have been only  $1\frac{1}{8}$  inch through. It weighs nearly 3 lbs. 10 ounces.

FIG. 11. Axe-head.  $\frac{1}{2}$ .

An axe-head of the same character was found in the Romano-British village at Woodcuts Common<sup>d</sup> by General Pitt-Rivers.

The next five to be described are all of one pattern and without any rim round the eye. They vary in extreme length from  $7\frac{1}{2}$  inches to 8 inches. The eyes are oval, about  $1\frac{1}{2}$  inch by 1 inch, and the hammer faces from  $1\frac{1}{2}$  inch square

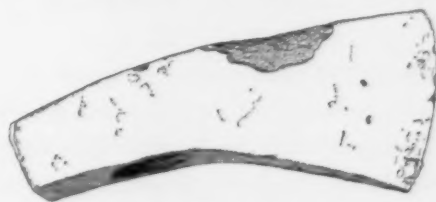
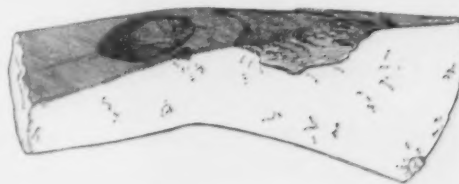
FIG. 12. Axe-head.  $\frac{1}{2}$ .

FIG. 12. Upper View.

to  $1\frac{3}{4}$  inch by  $1\frac{1}{4}$  inch. The cutting edges, which are slightly curved, are from 3 inches to  $3\frac{3}{8}$  inches long. The heaviest weighs 3 lbs. 7 ounces and the lightest 2 lbs. 15 ounces.

<sup>a</sup> Lysons, *Reliquiae Britannico-Romanæ*, ii. Pl. xi. 2.

<sup>b</sup> *Technol.*, ii. 193.

<sup>d</sup> *Excav. in Cranborne Chase*, i. Pl. xxvi. 2.

<sup>c</sup> *La ferronnerie*, ii. 151.

The other two are smaller, weighing only 2 lbs. and 1 lb. 10 ounces respectively. They are rather more curved in form and the eyes nearer the hammer end. They are  $6\frac{5}{8}$  inches and 7 inches in extreme length, with edges about 3 inches wide and hammer faces  $1\frac{1}{2}$  inch square and  $1\frac{3}{8}$  inch by  $1\frac{1}{4}$  inch.

In general appearance they closely resemble the *franciscas* so frequently found in Merovingian and Saxon tombs. An axe-head of the same form and about the same size occurred in the Chesterford hoard.<sup>a</sup> One from Combe End,<sup>b</sup> Gloucestershire, has the blade thinner near the shaft-hole.

*Adzes.*—Two adzes were present in the hoard, both of rather peculiar form, and not improbably tools for a cooper. The longer combines a hammer with an



Fig. 13. Combined Adze and Hammer.  $\frac{1}{2}$ .

adze (fig. 13). The socket for the shaft is about 1 inch in diameter at the inner end and  $1\frac{1}{8}$  at the outer end, so that the haft could be wedged firmly into it. The metal of the socket is about a quarter of an inch thick, and from one side of it at its outer end springs a square stem with rounded corners about  $2\frac{3}{8}$  inches long and barely

$\frac{3}{4}$  inch across, the end of which has been considerably "upset" by hammering. From the opposite side of the socket springs an adze-blade  $\frac{3}{4}$  inch square at its origin, and expanding to a cutting edge  $2\frac{1}{2}$  inches wide. The blade is about  $4\frac{1}{2}$  inches long and is bent in a kind of ogee curve. It is much inclined inward, so that a line drawn from the edge to the outer end of the socket would make an angle of about forty degrees. An adze of the same character but with the blade simply curved is in the Saumur Museum.<sup>c</sup>

The other tool is more like an ordinary adze. The shaft-hole, which is only  $\frac{5}{8}$  inch in diameter, is very near the flat end, which has a hammer-like face  $1\frac{1}{4}$  inch by  $\frac{3}{4}$  inch. The blade below the shaft-hole measures  $4\frac{1}{2}$  inches along its outer face, and expands into a gouge-like edge about  $1\frac{3}{4}$  inch across (fig. 14). The circle, of which it forms an arc, would be about 2 inches in diameter.

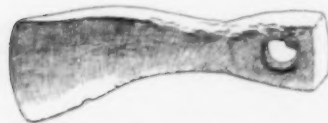


Fig. 14. Adze.  $\frac{1}{2}$ .

Such a tool is well adapted for any hollow work, such as the inside of tub-staves or bowls.

<sup>a</sup> *Archaeological Journal*, xiii. Pl. I. 9.

<sup>c</sup> *Coll. Ant.*, iv. Pl. ix. 4; Liger, *op. cit.* Pl. xxvi.

<sup>b</sup> Lysons, *op. cit.*, Pl. II. 5.

A somewhat analogous adze to that first described was in the Kingsholm hoard,<sup>a</sup> but the blade is not bent back and the length is rather greater.

Many representations of the Roman adze or *ascia* are known.<sup>b</sup>

*Chisels.*—Of chisels there are at least five, four of them socketed, and three of them apparently mortising chisels. The two largest are about 10 inches long, with tapering round sockets about 1 inch in diameter at the mouth. The blade in one is  $\frac{5}{8}$  inch by  $\frac{1}{2}$  inch, in the other  $\frac{3}{4}$  inch by  $\frac{3}{8}$  inch, and the edges  $\frac{7}{8}$  inch and  $\frac{3}{4}$  inch wide. (Fig. 15.) A lighter chisel is about  $8\frac{1}{2}$  inches long, with a cutting edge about  $\frac{1}{2}$  inch wide. Two others may be paring chisels. One of them is, however, of heavy make,  $8\frac{1}{2}$  inches long and nearly  $\frac{3}{4}$  inch wide at the edge. The other is lighter,  $6\frac{3}{4}$  inches long and  $\frac{5}{8}$  inch wide, with a socket  $\frac{3}{4}$  inch in diameter at the mouth. The blade tapers from about  $\frac{5}{16}$  inch in thickness to  $\frac{3}{16}$ , and then has a long bevel. The sockets seem to have been made by drawing out the iron and then welding the edges together over a conical mandrel. A sixth socketed tool is apparently a chisel, but is too much rusted for certain identification.



Fig. 15. Group of Chisels.  $\frac{1}{2}$

There is a flat blade  $\frac{5}{8}$  inch by  $\frac{7}{16}$  inch, but somewhat tapering, which has a tang about 3 inches long instead of a socket, and is in all  $10\frac{1}{2}$  inches long. The end is broken off, but the broken part is extant and is about 3 inches long, and is turned up at the end like a modern heel-tool for turning iron. It may possibly have been used for such a purpose.

*Gouges.*—Of socketed gouges there are five, made after the same manner as the chisels. The longest measures about  $12\frac{1}{2}$  inches, and beyond the socket has an octagonal stem about  $\frac{5}{8}$  inch thick (fig. 16). The channel of the gouge is about  $\frac{1}{2}$  inch across, and the edge is formed by grinding from the outside, after the manner of a modern turning gouge. The tool may have been intended for use with a lathe.

<sup>a</sup> Lysons, *op. cit.* Pl. xi. l.

<sup>b</sup> See Smith's *Dictionary of Antiquities*, 2nd ed., s. v. *Ascia*; and Blümner, *op. cit.* ii. 206.

Another gouge is 12 inches long, with a socket  $\frac{7}{8}$  inch in diameter at the mouth. The octagonal stem is fully  $\frac{3}{4}$  inch across. The hollowed part ex-



Fig. 16. Group of Socketed Gouges.  $\frac{1}{2}$ .

tends only a short distance up the stem, and has been ground from the inside. Its width is  $\frac{3}{4}$  inch. A gouge of the same kind, with a round stem which tapers from the socket to only  $\frac{5}{8}$  inch in diameter, expands rapidly to a cutting, almost semicircular, edge fully an inch across. This tool is  $9\frac{3}{4}$  inches long. The other two are of long and slender build, one having a round and the other a nearly square stem proceeding from sockets of about  $\frac{5}{8}$  inch and  $\frac{3}{4}$  inch openings. They have cutting edges about  $\frac{1}{2}$  inch wide, and have been ground both from the inside and the outside. They are  $10\frac{5}{8}$  and  $10\frac{1}{4}$  inches long respectively. A socketed gouge, 9 inches<sup>a</sup> long, occurred in the Kingsholm hoard. Another, about  $6\frac{1}{2}$  inches long, was found by General Pitt-Rivers at Woodcuts Common.<sup>b</sup> A German example is figured by Lindenschmit.<sup>c</sup>

*Paring-knives* (?).—There are two curious blades, which may possibly have been parts of some kind of shaving or paring tool, like a spokeshave. The blade of the more perfect of the two is  $8\frac{5}{8}$  inches long and rather more than 1 inch wide



Fig. 17. Paring-knife (?).  $\frac{1}{2}$ .

(fig. 17). The back of the blade is nearly  $\frac{3}{8}$  inch thick, and has at one end a small projecting stop about  $\frac{3}{8}$  inch long, and at the other a square tapering tang, of

<sup>a</sup> Lysons, *op. cit.* Pl. xi. 5.

<sup>b</sup> *Excav. in Cranborne Chase*, i. Pl. xxvii. 6.

<sup>c</sup> *Alt. u. heidn. Vorzeit*, I. Heft 12, Pl. v. 14.

which about  $1\frac{1}{2}$  inch in length remains. About  $\frac{1}{2}$  inch from this end of the blade there is a deep notch in the edge about  $\frac{1}{3}$  inch wide, running in nearly  $\frac{1}{2}$  inch. There is a similar notch in the other blade, but I am at a loss to assign a purpose for them. This second blade is considerably broken at one end, and looks like an ordinary knife. It may, however, well have been a blade of precisely the same character as that first described. The straight tang at the end is perfect and 3 inches long. Both blades are much striated transversely, possibly by wear against some gritty substance, or possibly from their having been wrapped up in a coarse cloth when buried. The latter supposition seems more likely to be true, as the striations appear on the edge, which is now blunt, owing to the whole surface of the blades being covered with a thick coating of rust.

*Plane.*—Of this tool a single specimen was found, in shape and character almost identical with the planes of the present day (fig. 18). It has, however, been plated with iron, both on the face and sides, the plate on the face having been secured by four broad-headed rivets passing through the wood, one at each end and one immediately behind the plane-iron. The face is  $13\frac{1}{4}$  inches



Fig. 18. Plane.  $\frac{1}{4}$ .

long and  $2\frac{1}{4}$  inches wide, and is turned up with a rounded angle at each end so as to grip the wooden body. The angles at the sides seem to have been slightly rounded. The opening for the iron is about 6 inches from the front end, and measures about  $1\frac{1}{2}$  inch by  $\frac{3}{8}$  inch. The greater part of the side plates has perished, but a little in front of the plane iron, and also behind it, a rivet, about  $\frac{1}{4}$  inch in diameter, passes from side to side. On the rivet behind the plane iron is a leaden roller about  $\frac{3}{4}$  inch in diameter, which seems to have formed the support of the plane iron, which was probably secured in its place by a wedge against the rivet in front of it, the opening for the passage of the shavings being on the other side of the rivet. The plane-iron is about  $4\frac{1}{2}$  inches long and  $1\frac{3}{8}$  by  $\frac{5}{16}$  inch in section. The sides have been slightly upset. It is fixed at an angle of 70 degrees to the face of the plane. I am uncertain as to the wood of which the body of the plane was made; at the present day it is usually beech.

A representation of a Roman plane is given, with those of several other carpenters' tools, on a sepulchral monument, published by Gruter.<sup>a</sup> Another is from a

<sup>a</sup> Smith's *Dictionary of Antiquities*, 3rd ed. ii. 243.



monument at Rastadt.<sup>a</sup> In each case the body of the plane seems to have been made lighter by having two transverse openings through it. These two openings have by some authors, including Mr. James Yates and Mr. Marindin in Smith's Dictionary,<sup>b</sup> been regarded as intended to allow of the passage of the shavings. This view is, of course, erroneous, and has been exploded by Blümner. In the museum at Naples is a plane from Pompeii,<sup>c</sup> which closely resembles the Silchester example.

Mr. Hilton Price has kindly called my attention to two other Roman planes from the valley of the Rhine. One of these, found at Cologne, is in very perfect

condition, and appears to have been formed with an ornamental frame-work entirely of iron without any wood inserted. The other, in the Saalburg Museum at Homburg, is imperfect, and only one of the side-irons and the plane-iron has been preserved. The latter has a maker's mark PERGNVS F—Peregrinus fecit.

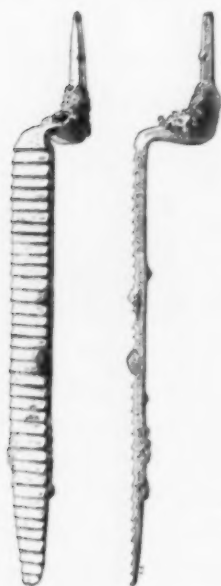


Fig. 19. File. 4

*File.*—The last tool to be described is a kind of single-cut flat file, the cutting surface of which, however, has not been produced in the ordinary manner, but by its having been filed into teeth like those of a saw (fig. 19). These teeth are not quite at right angles to the axis of the blade. They are rather shallow, and run about five to the inch. The face of the file is about  $7\frac{1}{2}$  inches long and  $\frac{7}{8}$  inch in extreme width. At the point it is only  $\frac{3}{8}$  inch wide, the sides being curved like those of a modern file. It has a cranked tang rising  $1\frac{1}{2}$  inch from the face and then tapering for about  $2\frac{1}{2}$  inches for it to

be fixed in a handle. It appears to be a tool adapted for working wood rather than metal.

A cranked file of the same kind, but much narrower and rounded on the face, was found at Hod Hill, Dorset, and is now in the British Museum. Some straight files toothed in the same manner are given by Daremberg and Blümner.<sup>d</sup> They are, however, of bronze.

<sup>a</sup> Blümner, *op. cit.* ii. 227.

<sup>c</sup> Liger, *op. cit.* Pl. xxviii.

<sup>b</sup> s. v. *Runcina*.

<sup>d</sup> *Op. cit.* iv. 276.

*Lamp.*—The only iron objects that remain to be described are a lamp, a gridiron, and a horseshoe. The vessel for holding the oil or grease for the lamp (fig. 20) has been much injured. What remains of it is saucer-shaped, about 3 inches in diameter and  $\frac{3}{4}$  inch deep. The wick-end is wanting, but from the margin of the saucer at the other end a handle, formed of a strip of one piece with the saucer, stands up to a height of 2 inches. The upper part is bent round so as to form a conical socket  $\frac{1}{2}$  inch in diameter at the mouth, but the strip below, where it joins the edge of the saucer, is only  $\frac{1}{2}$  inch wide. The lamp has been riveted on to an upright stem, barely  $\frac{1}{2}$  inch in diameter, supported on a tripod, into which the stem has been divided, each from  $2\frac{1}{4}$  inches to  $2\frac{1}{2}$  inches long, and turned down to form flat feet, so that the bars are about  $\frac{1}{2}$  inch above the surface on which the lamp stands. The bars are nearly square in section, and have one of the angles upwards. In general character this lamp is much like an iron candlestick from a Roman villa at Abbots Ann, preserved in the Andover Museum, and figured by Mr. Roach Smith.\* This, however, is only 6 inches high.



Fig. 20. Lamp. 1

*Gridiron.*—Another very interesting object found with the others in the pit is a large gridiron well adapted for cooking purposes (fig. 21). It consists of an iron frame, nearly square, being about 17 by 18 inches, formed of bar-iron about  $\frac{3}{4}$  by  $\frac{1}{4}$  inch full, and supported at the angles on four feet about 4 inches high. Within this frame at each end are two bars riveted through it about  $1\frac{1}{4}$  inch apart. Within the inner bars and at right angles to them are riveted six similar bars, three at each end. Within these again are six more bars arranged in a similar manner, and also a central bar which expands into a circle about 3 inches in diameter, well adapted for the reception of a small saucepan or pot. The bars of which this framework consists are all about  $\frac{5}{8}$  inch deep by  $\frac{1}{4}$  inch thick. The gridiron has somewhat perished by rust, and has been skilfully restored by Mr. Ready. It shows signs of having been warped by the fire over which it was used. At each end of the gridiron is a ring about 3 inches in diameter, passing through a loop riveted into the frame.

Examples of Roman *craticulae* are rare in this country, but a small one from

\* *Collectanea Antiqua*, vi. 247.

Icklingham is in the British Museum. Some others, one with a ring at each end, are figured by Liger,<sup>a</sup> but are of quite plain construction. Several from Pompeii

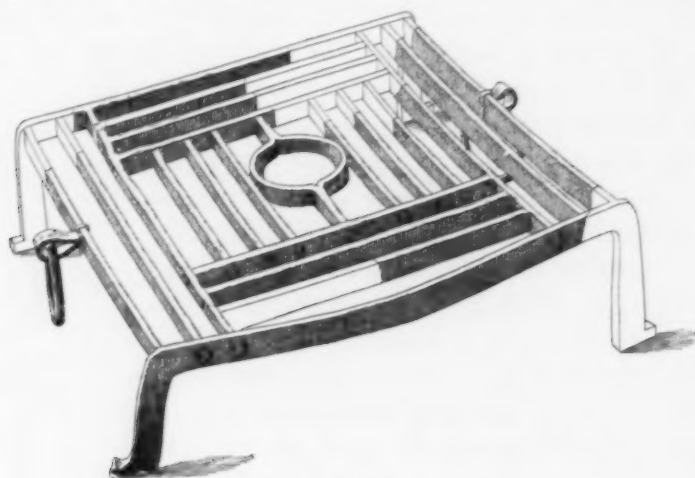


Fig. 21. Gridiron.  $\frac{1}{2}$ .

are preserved, with numerous other cooking utensils, in the Museum at Naples, but I cannot speak with certainty as to the correspondence of any of them in their details with the Silchester specimen.

*Horseshoe.*—Among the miscellaneous objects found was one of those peculiar horseshoes to which the name of hippo-sandal has in modern times been applied, and possibly some fragments of a second. It differs in form from that engraved in the *Journal of the British Archaeological Association*,<sup>b</sup> inasmuch as it has no hook in front and the two side wings were connected above. It was kept in its place by two projecting wings which bend over to clasp the hoof which was, as it were, dovetailed into the shoe. These were joined above so as to form an arch, at the top of which was a ring. It was probably secured by some simple bandage that passed through this ring and under the hook behind the foot. The flat bottom of the shoe has a small kite-shaped opening in it, and the fore part of it is rather worn away by use. In an example, figured by Mr. Roach Smith,<sup>c</sup> each of the side wings has a ring at the top through which a band might pass, and there are two holes in the hind plate that would be suitable for a string passing over the hoof. Mr. Roach Smith mentions the use in Holland at the present day

<sup>a</sup> Figs. 342 and 343.

<sup>b</sup> Vol. xxiii., Pl. v. p. 107.

<sup>c</sup> *Coll. Ant.* iii. p. 128; see also his *Roman London*, p. 146.

of iron pattens for horses fastened to the foot by a leather band. Such shoes as this from Silchester seem admirably adapted for temporary use. They are said to have been occasionally found close to ancient nailed horseshoes.<sup>a</sup> General Pitt-Rivers in his examination of the Romano-British village, Woodcuts Common,<sup>b</sup> found both hippo-sandals and the ordinary horseshoes. Several examples found in London are preserved in the Guildhall Museum, and Lindenschmit<sup>c</sup> has figured others from Mainz. He regards them as temporary shoes for the protection of injured hoofs. Others will be found in Liger.<sup>d</sup>

Two horseshoes of nearly the modern form, with calkins and apparently nail-holes, form the device on some bronze *tesserae* ascribed to the time of Domitian.\*

There remains one object of metal to be described, which, though not of iron, formed part of the mass of tools and implements discovered in the pit at Silchester. It is the beam or *jugum* of a pair of scales, made of bronze and of a rather peculiar character (fig. 22). In total length this beam is about 13 inches. At the centre it is about  $\frac{3}{8}$  inch in diameter, and it tapers away in either direction towards the ends, which are ornamented by neat mouldings and finished with a narrow projecting eye, through which passes a small ring formed of wire. In the centre of the beam is a projecting tongue about  $1\frac{1}{4}$  inch long, which passes through a slit in a handle or harness 3 inches long, terminating in a small ring and decorated with a succession of small mouldings. Through the harness and through the top of the tongue a small hole has been drilled, and when these coincide the beam would presumably be in a horizontal position, and the weight on each side of the beam equal. The beam works on a round pin passing through the base of the harness and of the tongue. The *lances* or scales themselves are absent. A peculiar feature of the beam is that each of its limbs, and not, as is frequently the case, only one is subdivided into a number of equal divisions by small marks punched on the top. One limb is thus divided into twelve equal parts, the third and the ninth marks being double, so that they may be easily recognised. The other limb was intended to be divided into twenty-four equal parts, though the intention has not been perfectly carried out. The sixth, twelfth, fifteenth, and eighteenth marks are doubled for the sake of distinction.

The more common form of weighing instrument in use among the Romans was the *statera* or steel-yard, in which the principle of the lever was introduced and the weight ascertained from the position of a moveable weight which was made to

<sup>a</sup> See Smith's *Dictionary of Antiquities*, 2nd ed. ii. 687.

<sup>b</sup> *Excav. in Cranborne Chase*, i. Pls. xxv. and xxvii.      <sup>c</sup> *Alt. u. h. Vorz.* i. Heft xii. Pl. v. 1 to 6.

<sup>d</sup> *Op. cit.* ii. 87.

<sup>e</sup> Cohen, viii.—*Annuaire de Numismatique*, 1892, Pl. VIII. 1-2.

slide along the longer arm of the lever—steelyards, and several of these weights of a plain character, and not, as is frequently the case, in the shape of busts, have been found during the excavations at Silchester.

The scales now under consideration appear to have combined the character of the ordinary balance or *bilanz* and of the steel-yard—and by this means the use of

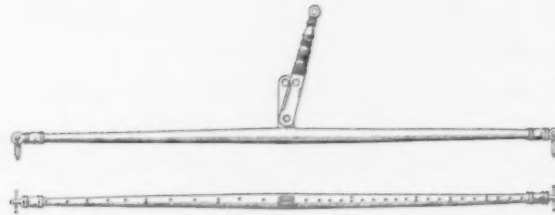


Fig. 22. Bronze Balance.  $\frac{1}{2}$ .

small portable weights, which are easily lost, was to some extent avoided. A weight of one pound to place in one of the scales, and another sliding weight of one pound to move along the beam would enable the user to weigh with a fair degree of accuracy any object from one or two ounces up to two pounds in weight. If the object were over a pound the sliding weight and that in the scale would be on the same side of the centre of the beam. If it were less than a pound the two weights would be on opposite sides of the centre. There being twelve ounces to the pound the shifting of the weight from point to point would give an ounce or half an ounce, in accordance with its being on the side divided into 12 or 24. The double marks on the beam would show the position of the weight when aliquot portions of a pound larger than the ounce had to be weighed. As a rule, however, the sliding weight was less than a pound. On a beam in the British Museum it is indeed less than an ounce, and it may have served only to adjust the scales.

In conclusion I have only to apologise for the amount of dry detail into which it has been necessary to enter in describing this interesting deposit. I can only urge in extenuation that an account of such objects as those which I have been describing would be of comparatively little value to future observers had minute peculiarities been neglected.

X.—*A Fifteenth Century Treatise on Gardening.* By "MAYSTER ION GARDENER."  
*With remarks by the HONOURABLE ALICIA M. TYSEN AMHERST.*

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Read March 9, 1893.

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### INTRODUCTION.

WE have few writings on the subject of English gardening before the sixteenth century, when Turner, Tusser, Hill, Fitzherbert, and Gerard gave their well-known works to the world, and were quickly followed by numerous other writers on the same subject.

Earlier than this, translations of Latin works were current; among them we may notice Macer's "Herbal," first printed in 1487, and a work by Palladius, of which several MSS. exist, written during the first half of the fifteenth century.\* The only original work of about this date, besides the present one, seems to be that of a monk, Nicholas Bollarde. In the copy in the British Museum, Sloane MS. No. 7, it occupies little more than two closely-written quarto pages.

The remarkable poem which forms the subject of the present paper is contained in a MS. in the library of Trinity College, Cambridge. The book was one of those bequeathed to the college by Roger Gale. It is long and narrow, measuring  $12\frac{1}{4}$  inches by  $4\frac{1}{2}$  inches. It contains eighty-eight pages, the last twelve being more or less mutilated; but John Gardener's poem, which begins on the verso of page 18, and fills five pages, is complete. The MSS. in this book mostly date from the fifteenth century, but at the end are some of about the middle of the sixteenth. John Gardener's poem was apparently written about 1440-1450, but the title headings are in a later hand. Another poem of about

\* Palladius on Husbandry, Early English Text Society.



the same date is entitled "A Tryumphe," and "K. Henry VI." has been added in a later hand, which explanation is correct. Another piece contained in this interesting volume, "Who can not wepe, come lerne of me," was edited by Dr. Furnivall, in his "Hymns to the Virgin," for the Early-English Text Society in 1867; and in 1868 he edited for the same society "The Babees Book," in which is printed a poem of seventy-two lines, entitled "What ever thou sey, ayse the well," also from this MS. There are besides several Latin and some other English verses, the headings of two of which are "Pluck off his bells and let him fly" and "For ever thank the God of all."

Not only is John Gardener's poem of great interest to the student of Middle English, but it also throws considerable light on Early-English gardening, and it was with reference to this subject, on a history of which I am at present engaged, that I was led in the first instance to consult the MS.

John Gardener must certainly have been a practical gardener, as the poem is a series of most sensible and reasonable instructions for growing fruits, herbs, and flowers, and his work is singularly free from the superstitious beliefs in astrology, and the extravagant fancies and experiments in grafting and rearing plants, especially fruit trees, so prevalent in the writings of this period.

That he was not skilled in making verses can be seen by his poem. The lines frequently fail to scan, and many of the rhymes are very imperfect, or mere assonances, as Valentyne and tyme, long and stonde, lond and long, best and set, ynne and dyng, wyde and leyde, stok and up. In line 148, a space has been left blank by the scribe, who evidently hesitated before inserting the word "te" = go, which verb was then nearly obsolete.

The gardens of this period were small, being confined within the castle walls. The principal bed for the reception of herbs and flowers was a bank raised up beside the wall throughout its length. Shrubs and fruit-trees were admitted in the enclosure, but the larger proprietors possessed orchards as well, beyond the castle walls. Kent and the south-eastern counties, and the neighbourhood of London, had long been famous for their orchards and gardens, which supplied the London market; so it is not surprising that this first practical treatise on gardening, in English, can be assigned to that locality.

Professor Skeat has kindly pointed out several words that occur in the poem which afford strong evidence of a southern dialect, viz. the form "growynde" in line 58; in the phrase "they beth ysett" (line 117), beth and ysett are both southern; and the use of *thay*, originally a Northumbrian form, shows that the date is after 1400.

The plurals of substantives usually end in ys, as "sedys," "wortys," "treys." Not only the present singular ends in yth, as "a-cordyth," but also the present plural, as "they begynnyth." The form "thou schall" occurs, rhyming with "fall," and the past participles frequently have *y* prefixed, as "y strow" = strewn, "y made" = made, "y sett" = set. *H* is dropped, as in "ervyst" for harvest (line 106). *Gn* is confused with *ng*, as in "y dygnyd," error for "y dyngyd" = dinged.

Some words are curiously divided, as "every chone," for everych one = every one; "al ther best," for alther best = best of all; "a nother," for an other. The pronominal forms "ham" = them, "hare" = their, are seldom found except in the Kentish dialect, and occur frequently in the "Ayenbite of Inwyt," a Kentish poem written in 1340.

The southern dialect preserved the final *e* longer than any other, but few traces are here discernable, owing to the lateness of the date. Still, if line 84 scans properly—"Forkys made of asche-tre"—the word *asche* is dissyllabic, as in the Ayenbite. The distinctive Kentish *e* for the Anglo-Saxon short *y* does not appear. A large number of the words occur in the ordinary Midland spelling of the neighbourhood of London. All this inclines Professor Skeat to the supposition that the author was Kentish, and the scribe's dialect Kentish or London.

I am afraid it is impossible to identify the author of this poem. I find a certain John Gardener was gardener of the king's garden at Windsor in the beginning of Edward III.'s reign, but there is a period of over a hundred years between the entry referring to him and the date of the MS. copy of this poem. Could it have been this identical John Gardener who was remembered by Nicholas Sturgeon, priest, in his will dated 1454, perhaps as a recognition for some assistance in horticultural matters? Sturgeon was buried in St. Paul's, London, and though he left money to churches in the west of England, he also gave both to Christchurch and St. Austin's, Canterbury, and he bequeathed "to John Gardyner xxvj s. viij d. and a riding gowne with the hode."<sup>a</sup>

In forming a glossary to the plant names occurring in the text, I have frequently referred to Britten and Holland's *Dictionary of Plant Names*, and also to Turner's *Names of Herbes*, edited by Britten, and Turner's *Libellus*, edited by Drayton Jackson.

I have further collected much information from some MS. notes in a copy of the "Aggregator Practicus de Simplicibus," printed, probably by Schœffer, before

<sup>a</sup> *Fifty Early English Wills*, ed. Furnivall, Early English Text Society.

1484. There is a copy in the British Museum which agrees in collation with this copy, which is in my father's library. The book is described by Brunet as "Herbarium," and he does not give the title quoted above, but it is found on the *recto* of the first leaf, line 21. There are MS. notes, both in Latin and in English, and they bear the character of having been entered at different times during the first quarter of the sixteenth century. Some of the Latin notes may be even earlier. The English names, and generally a description of the plant, and its medical uses, are noted, sometimes at considerable length.

I cannot conclude without again expressing my thanks to Professor Skeat for his valuable help and information; I am also much indebted to Mr. W. Aldis Wright, Dr. Sinker, the Librarian, and to Mr. White, the sub-Librarian, of Trinity College, Cambridge, for the kind assistance they have given me.

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MS. IN THE LIBRARY OF TRINITY COLLEGE, CAMBRIDGE.

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THE FEATE OF GARDENINGE.<sup>a</sup>

Ho so wyl a gardener be  
 Here he may both hyre & se  
 Euery tyme of the ȝere & of the mone  
 And how the crafte schaff be done  
 5 Yn what maner he schaff delue & sette  
 Bothe yn drowthe and yn wette  
 How he schaff hys sedys sowe  
 Of euery moneth he most knowe  
 Bothe of wortys and of leke  
 10 Ownyns and of garleke  
 Percely clarey and eke sage  
 And all other herbage.

<sup>a</sup> This title is added in a later hand.

OFF SETTYNG' AND RERYNG' OF TREYS.

- Yn the calenders of Ianuar'  
Thu sclatt treys both set & rere  
15 To graffy ther yn appyl & pere  
And what treys ys kynd hem to bere  
Appul and A appul-tre  
For ther ys kynd ys most to be  
Of pere y mynde 3orne  
20 To graffe hym a-poñ a haw-thorne.

OF GRAFFYNG' OF TREYS.

- Thu myzt graffe appul & pere  
Fro the moneth of septembr' to auerer<sup>a</sup>  
Wyth a saw thou schalt the tre kytte  
And w<sup>t</sup> a knyfe smowth make hytte  
25 Klene A-tweyne the stok of the tre  
Where-yn that thy graffe schall be  
Make thy Kyttyng' of thy graffe  
By-twyne the newe & the olde staffe  
So that hit be made to lyfe  
30 As the bake & the egge of a knyfe  
A wegge thu sette yn myddys the tre  
That euery syde fro other fle  
Tyl hit be openyd wyde  
Where yn the graffe schal be leyde  
35 The rynde of p<sup>e</sup> graffe & p<sup>e</sup> stok of p<sup>e</sup> tre  
Most a-corde how that hit ever be  
Al-so sone p<sup>e</sup> graffe a-cordyth w<sup>t</sup> the stok  
Take the wegge A-none vp  
Upon the stok att A-bowte  
40 Clay mote be leyde to kepe p<sup>e</sup> rayne owte  
For the schowrys of the rayne  
Upon p<sup>e</sup> clay thu schalt mesē<sup>b</sup> layne

<sup>a</sup> April, elsewhere spelt Anerell.

<sup>b</sup> A. S. mēoſ = mess.

- Wyth a wyth of haseltre rynde  
 The stoke fast thu bynde  
 45 But thu do thys y vnderstonde  
 Al thy graffe wul turne apon thy honde  
 Yf he be graffyd at raysowne  
 He wul bere þ<sup>e</sup> next saysowne.

---

OF CUTTYNG' AND SETTYNG' OF VYNYS.

- Of setting' of vynys we most have yn mynde  
 50 How thay schal be sette al yn here kynde  
 Whyle hit ys esterne wynde  
 Thu schalt kytte noþer sette no bynde  
 When the wynde ys yn the west  
 To kutte & to sette ys al-ther<sup>a</sup> best  
 55 Yn thys maner þ<sup>a</sup> schalt kytte þ<sup>a</sup> vyne-tre  
 To be sette hit schal have knottys þre  
 Too schal be sette yn the grownde  
 And one A-boue for growynde  
 Yn þ<sup>e</sup> lond where h' schal growen ynne  
 60 Hit wold aske to be dyzte<sup>b</sup> w<sup>t</sup> dyng  
 Every zere w<sup>t</sup> ouzt-drede  
 Þey wold aske dyng' A-bouzt ham sprede  
 Grow they wul sone and long' be  
 Than put vnder ham forkys of tre  
 65 Of thys tale lete us now stone<sup>c</sup>  
 And to A-nother we wul gone.

---

OF SETTYNG' AND SOWYNG' OF SEDYS.

- Yn the day of Seynt Valentyne  
 Thu schalt sowe this sedys yn tyme  
 For they beþ herbys vn-meke<sup>d</sup>  
 70 þ<sup>a</sup> schalt ham set & sow eke

<sup>a</sup> Genitive-plural of all = best of all.

<sup>b</sup> Dressed, prepared.

<sup>c</sup> Stoud = stand still, leave off.

<sup>d</sup> Unsoft = hardy.

- They þ<sup>e</sup> beþ stronge and nouȝt meke  
The names of hem ys garlek & leke  
Oynet þ<sup>a</sup> schalt sow then  
Other þ<sup>e</sup>r after sone A-pon  
To set oynyns to make the sede  
75 Y wul the tel for my mede<sup>a</sup>  
Yn auerett oþer yn mars as y haue y-fownde  
To set other to sowe hem yn the grownde  
When they bygynnyth to grow hye  
80 Lete none of ham towche other' nye  
Vnder hem than put þ<sup>a</sup> schaff  
That none of hem downe nouȝt faff  
Yf þ<sup>a</sup> wyl that hy the  
Forkys y made of asche-tre  
85 To haue ham saue & kepe hare prow<sup>b</sup>  
They wolde aske askys a-bowt ham y-strow  
When they rype they wyl schow  
And by the bollys þ<sup>a</sup> schalt hem know  
The sede w<sup>t</sup>-yn wul schewe blake  
90 Then þ<sup>a</sup> schalt hem vp take  
They wul be rype at the fuff  
At lammasse of peter Apostuþ<sup>c</sup>  
On thys maner þ<sup>a</sup> schalt þ<sup>e</sup> sedys drye  
Vppon a clothe þ<sup>a</sup> the sedys lye  
95 A-ȝen the sonne his kynd ys  
For to ly to dry y-wys<sup>d</sup>  
Here of y can no more say  
But now y wul bygynne a new lay.

---

OF SOWYNG' AND SETTYNG' OF WURTYS.

- Wurtys we most haue  
100 Both to mayster & to knaue  
Ye schul haue mynde here  
To have wurtys yong' al tyme of þ<sup>e</sup> yere

<sup>a</sup> = reward = I will tell you and find my reward in doing so.

<sup>b</sup> = good.

<sup>c</sup> 29th June.

<sup>d</sup> = verily.



- Euery moneth hath his name  
 To set & sow w<sup>t</sup>-out eny blame  
 105 May for somer ys al the best  
 July for eruyst<sup>a</sup> ys the nexst  
 Novembr' for wynter mote the thyrde be  
 Mars for lent so mote y the  
 The lond mote wel y dygnyd<sup>b</sup> be  
 110 Y-dolue y-sturyd syre parde<sup>c</sup>  
 Whan þ<sup>u</sup> hast y-sow thi sede on long'  
 Foore wykys ther' aftur þ<sup>u</sup> let hem stonde  
 Whan þ<sup>e</sup> iiij wykes beth al ouer gone  
 Take thy plontys euery-chone  
 115 And set ham yn kynd fat lond  
 And thay wul fayre wurtys be & long  
 W'yn too wykes þ<sup>i</sup> thay beth y-sett  
 Thu may pul hem to thy mete  
 And so fro moneth to monethe  
 120 þ<sup>u</sup> schalt bryng' thy wurtys forthe  
 They þ<sup>i</sup> schal bere sede lasse & more  
 Let ham grow to make the store  
 Of wurtys can y no more telle  
 Of other herbys her'after y schelle.

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OF THE KYNDE OF PERSELYE.

- 125 Further ouerpasse y nett<sup>d</sup>  
 Tyl y haue tolde þ<sup>e</sup> kynde of percett  
 Percett kynde ys for to be  
 To be sow yn þ<sup>e</sup> monthe of mars so mote y the"  
 He wul grow long' and thykke  
 130 And euer as he growyth þ<sup>u</sup> schalt hym kytte  
 þ<sup>u</sup> may hym kytte by reson'  
 Þryes yn one seson'

<sup>a</sup> Harvest = autumn.<sup>b</sup> = dyngyd = danged.<sup>c</sup> = delved, stirred, sir, parde! (= par Dien).<sup>d</sup> Will not.

Scribe's error for "so mote y the" = so may I thrive.

- Wurtys to make & sewes<sup>a</sup> also  
Let hym neuer to hye go  
135 To lete hym grow to hye hit ys grete foly  
For he wul then blest<sup>b</sup> and wanchy<sup>c</sup>  
Hys kynde ys nouȝt to be sette  
To be sow ys al-ther' best  
Thay þ<sup>t</sup> the sede schal bere the  
140 Kytte hym nouȝt but lete hym be  
Fro mydwynter to the natyuyte  
And he schal fayre sede be  
Of perceff ys lyȝt to know  
Take hede he wul nouȝt be set but sow  
145 For yf he be set be wul wax thynne  
And than he wul nouȝt be gode to rypyne  
Now here-of lete we be  
And to a-nother' we wul<sup>d</sup> . . . . te<sup>e</sup>

OF OTHER MANER HERBYS.

- Of other' herbys y schalt telle  
150 þerfor' y mote A stownd<sup>f</sup> dwell<sup>g</sup>  
Yn what moneth ys heruest ham sette & sow  
Sone here-after þ<sup>u</sup> schalt knowe  
Yn the moneth of Auereff  
Set & sow ham euerydeff  
155 Herbys to make bothe sawce & sewe  
þ<sup>u</sup> schalt haue ham here A rewe  
Of al the herbys of yrlonde  
Here þ<sup>u</sup> schalt knowe meny onde<sup>h</sup>  
Pelyter dytawnder rewe & sage  
160 Clarey tyme ysope and orage  
Myntys sauerey tuncarse & spynage  
Letows calamynte auans & borage

<sup>a</sup> = juice, pottage, savoury dish.

<sup>c</sup> = become sickly, weak.

<sup>e</sup> = go A. S. *téon* = to draw, pull, or go.

<sup>g</sup> = linger or dwell on it.

<sup>b</sup> = blast = wither.

<sup>d</sup> Left blank in MS.

<sup>f</sup> = an hour, time, period = a while.

<sup>h</sup> = one.

- Fynel sowthrynwode warmot & rybwort  
 Herbe Ion herbe Robert herbe Water & walwort  
 165 Hertystonge polypody parrow & comfery  
 Gromel woderofe hyndesatt & betony  
 Gladyn valeryan scabyas & sperewort  
 Verueyn wodesour' waterlyly & lynerworte  
 Mouſeer' egri moyne honysoke & bugutt  
 170 Centory horsel adderstong' & bygutt  
 Henbane camemyl wyldtesyl & stychewort  
 Weybrede growdyswyly elysauwder & brysewort  
 Merege lauynduff radysche sanycle & seueny  
 Peruyнке violet cowslyppe and lyly  
 175 Carsyndyllys strowberys and moderwort  
 Langebefe totesayne tansay & feldewort  
 Orpy nepte horehownd & flos campi  
 Affodytt redeuay primrole & oculus *Christi*  
 Rose ryde rose whyzte foxgloue & pympernold  
 180 Holyhocke coryawnder pyony & þ<sup>e</sup> wold  
 All this herbys by seynt Mychaett  
 Wold be sette yn the moneth of Auerett  
 Further'-more wul y noȝt go  
 But here of herbys wul y ho.<sup>a</sup>

## OF THE KYNDE OF SAFEROWNE.

- 185 Of saferowne we mote telle  
 He schal be kepte fayre & welle  
 Saferowne wul haue w'touȝt lesyng'  
 Beddys y-made wel wyth dyng'  
 For sothe yf thay schal bere  
 190 þay wold be sette yn þ<sup>e</sup> moneth of September<sup>b</sup>  
 Three days by-fore seynt mary day natyuyte  
 Other the next woke þerafter so mote y the  
 W<sup>t</sup> a dybbyl þ<sup>a</sup> schalt ham sette  
 That þ<sup>e</sup> dybbyl by-fore be blunt & grete

<sup>a</sup> = stop.<sup>b</sup> September 8th.

195 Three ynychys depe they most sette be  
And thus seyde mayster Ion Gardener to me.

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Explicit hic liber qui vocatur Anglice  
Mayster Ion Gardener.

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LIST OF ABBREVIATIONS.

B. & H. = Britten and Holland, "Dictionary of English Plant Names," 1878.  
T. n. of H. = Turner's "Names of Herbes," 1548, reprint 1881, edited by Britten.  
T.'s Lib. = Turner's "Libellus," 1538, reprint 1877, edited by Drayton Jackson.  
T.'s Herbal = Turner's "Herbal," ed. 1551.  
Gerard's App. = Appendix to Gerard's "Herbal," ed. 1597.  
Agg. = "Aggregator Practicus de Simplicibus" (printed before 1484).

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Adderstong = *Ophioglossum vulgatum* or *Arum maculatum* (B. & H.). "Lingua serpentis is Adderstonge: his levys be lyke Affodyll, but more? & is sharp at the ende: his gadrynthe is yn Apryll" (Agg.).

Affodyll = *Narcissus Pseudo-narcissus*. Affodyll Daffadilly (T.'s Lib.).

Auans = *Geum urbanum*, Avance or Avens (B. & H.). "Anancea, anglice Anaunce, & is levyd lyke harefoote sum men call it soote he berythe a yelowe floure as it wer Turmentyll; gud agaynst the fever, in powder, & dronk w<sup>th</sup> watyr; & in latyne is called Sanamanda, & in Englyshe sum calle hyt Ache, & Harefoote, & Auans" (Agg.).

Appyl = Apple = *Pyrus Malus*; and garden varieties.

Asche tre = Ash = *Fraxinus excelsior*.

Betony = *Stachys Betonica*.

Borage = *Borrago officinalis*.

Bryswort = Bruisewort, Brusewort, or Brisewort = *Bellis perennis*, *Saponaria officinalis* or *Symphytum officinale* (B. & H.). "Consolida minor is desyre breswort or bonworte" (Agg.). Bonwort = *Bellis perennis* (B. & H.). Consound = *Consolida minor* = *Bellis perennis* (B. & H.).

Buguff = Bugle = *Ajuga reptans* (B. & H.). "Bugle or brombugle oxtonge or longe-de-beffe Buglossa" (Agg.). Bugloss Langdebefe = *Echium vulgare* (B. & H.).

Bygnff = Bigold = *Chrysanthemum segetum* (B. & H.).

Calamynte = *Calamintha officinalis*. "The garden mynt" (Agg.).

Camemyl = Chamomile = *Anthemis nobilis*. "Camamyll" (Agg.).

Carsyndylls. ? "Cars or Carse = cress" (B. & H.) a name applied to many cruciferous plants.  
Carsons = *Nasturtium officinale* (App. B. & H.). It seems unlikely however that this is watercress. "dyllys" = *Narcissus poeticus*.

Centory = Great Centaury = *Centaurea nigra* and Little Centaury = *Erythraea centaurium*  
Centaury = *C. nigra* or *E. centaurium* (B. & H.). "Centaurea anglice centaurye or erthgall *C. minor* less centarye or Crystes ladder" (Agg.). Earthgall = gentian tribe especially *E. centaurium* (B. & H.). Christes ladder = *E. centaurium* or *Centaurea major* (B. & H.).

Clarey = Clary = *Salvia sclarea*.

Comfery = Comfrey = *Symphytum officinale*.

Coryawnder = Coriander = *Coriandrum sativum*.

Cowslippe = Cowslip = *Primula veris*.

Dytawnder = Dittander and Dittany = *Lepidium latifolium*, or *Origanum Dictamnus* (B. & H.).  
Turner (n. of Herbes) under *Dictamnus* "may be named in englishe righte Dittany for some cal *Lepidium* also Dittany." "*Diptamus anglice Dytan or Dyland detayne*" (Agg.). This appears to be *Origanum* or *Marjoram*.

Egremoyne = Egremoyne = Agrimony = *Agrimonia Eupatoria*.

Elysawnder = *Smyrniolum Olusatrum* = Alysander (B. & H.). "Alexander or Stondemerche" (Agg.).

Feldwort = Felwort and Fieldwort = *Gentiana Amarella* (B. & H.). "Genciana is callyd genecyan or baldwyne or fyldworte" (Agg.). Feltwort = *Verbascum Thapsus* (Mullein) (B. & H.). "Foxglove levyd like Feldwort, but not so white and harye" (Agg.).

Floscampi ?? *Lychnis Flos-euculi* = or *Lychnis diurna* = Campion ?

Foxglove = *Digitalis purpurea*. "Erpina is foxglove long stalke & flours sadell red & most lyke a bell."

Fynel = Fennel = *Foeniculum vulgare*. "Fœnell aut Fynle" (T.'s Lib.). "Feniculus is fenell or fynkle" (Agg.).

Garleke, Garlick. *Allium sativum* or *Allium ursinum* (B. & H.).

Gladyn = *Iris foetidissima* or *Iris Pseudacorus* (B. & H.). "Acorum gladen a flag a yelow floure delyce" (T.'s Lib.) "Iris y<sup>e</sup> floure de lyce—purpull—Yreos, white—*Gladiolus* yollow"  
. . . Ireos is gladwyne or wand his levys be lyke floure de luce . . . a whyte floure & grow in watry places. Irus is floure de luce his floure is of ppull colo<sup>r</sup> & he growt in watyrs & gardyns" (Agg.). "*Gladiolus* is gladwyne a Ireos" (Agg.). *Acorus* = *Gladiolus* Gladen (Agg.).

Gromel = Gromwell = *Lithospermum officinale* "Gremill & Gromall Gromaly & Gromyl" (B. & H.). In the Aggregator Gromwell is entered three times: "Cauda porcina grom-mell," "Grand solis gromell," "Peucedamum = Cammoke or Grommell."

Growdyswyly = Growndyswyly = Groundswyll (Agg.) = Groundsel = *Senecio vulgaris*. "The medial y represents the Anglo-Saxon 'ge' in the original word, which was something like 'grundgeswylye'; in the seventh century, the form was gundswilge, *i.e.*, 'gound swallower,' gound being a disease of the eye which groundsel was supposed to dispel. When the word gound became scarce the more familiar ground was substituted, hence the modern name" (Prof. Skeat). It would appear that groundsel was intended for its medicinal use at this period, otherwise I fail to see why John Gardener should place, what is now considered a weed, among garden herbs.

Hasel tre = Hazel tree = *Corylus Avellana*.

Haw thorn = Hawthorn = *Crataegus Oxyacantha*.

Henbane = *Hyoscyamus niger*.

Herbe Ion = A variety of *Hypericum* or St. John's Wort. Grete Herbal gives *H. perforatum*.  
Andula = *herba Jonis* (Agg.). *Hypericum* or *Calendula officinalis* (B. & H.).

Herbe Robert = *Geranium Robertianum*.

Herbe Water = Herb Walter. Cannot identify. "Herba Walteri is called Herbe Walter, his leves be lyke pselye but whytier & thykker & fatt & tender he wyll ease wounds but he stynkethe" (Agg.).

Hertystonge = Hartystonge (Agg.) = Harts tongue = *Scelopendrium vulgare*.

Holyhocke = *Althaea rosea* or *Malva sylvestris* or *Althaea officinalis*. "Altea is hollyhok or holyoke or wylde malowse hit is comynly knowen . . . & hit berythe a red floure" (Agg.)  
"Malva is called Malowse or hokkes his levys be lyke holyhoke but playner & lessor" (Agg.) "Althea . . . marish mallowe or water malowe . . . some take not as they should do holyoke for Althea mershe mallowe (T. n. of H.). Malva is divided into Malvana hortense & sylvestrum. Malva hortensis is of two kindes . . . Holyoke . . . and French mallow; Mallow sylvestris . . . a wylde mallowe . . . and . . . Marrishe mallowe" (T. n. of H.) There is so much confusion among these allied genera that it is impossible to decide whether Holyhocke is here intended for *Althaea rosea*, the hollyhock of modern gardens.

Honysoke = Honeysuckle = *Lonicera periclymenum*.

Horehound = *Marrubium vulgare*.

Horsel = Horselle = Horsehele = *Inula Helenium* (B. & H.). "Enula campana or horsehele" (Agg.).

Hyndesall? = Hind-heal. In Gerard's Appendix it is entered "hyndheele is Ambrosia." Many plants were known as Ambrosia, *Chenopodium*, *Botrys* and *Ambrosia maritima* and *Teucrium scorodonia* (B. & H.). Hyndberry was a name for *Rubus Idæus*. Hind is a local name in Norfolk for a kind of sedge = *Carex divisa*?

Langhefe, generally supposed to be *Helminthia echinoides*, but Turner (Lib.) intends it for *Echium vulgare* (B. & H.). "Bugle or brembugle he beryth a blewe floure . . . and is called oxtonge or longe debeffe." Buglossa lange de boffe (Agg.) "Lingua cervi is



hartystonge. *Lingua bouis* is longdebeffe or oxtonge. *Lingua serpentis* is Adderstonge" (Agg.).

Lavyndull = *Lavandula vera*.

Leke = Leek = *Allium porrum*.

Letows = Lettuce = *Lactuca sativa*.

Lyly = Lily. *Lilium candidum* and other species of *Lilium*.

Lyverwort = *Agrimonia Eupatoria*, *Anemone Hepatica* or *Marchantia Polymorpha* (B. & H.).

The first we have had already as Egrimoyne; the second is more probable, Liverwort occurs twice in Agg. "Ameos or lydworte or lyuerworte or tanaye or shyrewort he levethe lyke red ealdern but the leves be muche lesse & sedethe as parselye" also "Epatica ys lyverworte, it growt by brynks & syds of wells & waters . . . he hath no stalke nor floure but small rounde levys." "Lichen = Liuerwort = *Marchantia Polymorpha* (T.'s Herbal).

Merege. Cannot identify. ? *Apium graveolens*. March or Merch (B. & H.). Merche = Smallage = *Apium* (Archæologia, xxx. 410). "Marche or Smalege . . . *Apium Commune* is smalache" (Agg.).

Moderwort = Motherwort = *Artemisia vulgaris* or *Leonurus Cardiaca* or *Lysimachia nummularia* (B. & H.). "Moderwort Arthimesia and Palma Christi is Moderworte or Stydfaste" (Agg.). The latter = *Ricinus communis* = Man's Motherwort (B. & H.).

Mouseer. = Mouse ear = *Hieracium Pilosella* or *Cerastium triviale* (B. & H.). "Mowse ere hathe lytle levys grene above & whyte under & yelow flours lyke to grana Dei & hathe no stalke, breke [the] herbe & he geveth mylke . . . he growethe lowe by the grounde yn fylde & bredethe all to gedre as it wer a flatt rounde as a syve. *Auricula muris* mouse eyre. *Pilosella*" (Agg.).

Myntys = Mint. Various species of *Mentha* (B. & H.). *Mentha* is called Myntes (Agg.). Mynte = *Mentha viridis* (T. n. of H.).

Nepte = Nep or Neppe or Nept = *Nepeta Cataria* or flowerheads of *Lavandula vera* or a turnip (B. & H.).

*Oculus Christi* = *Salvia verbanaca* (B. & H.). "Galitricum is *Oculus Christi* Watyrworte or clarye" (Agg.).

Orage = *Atriplex hortensis* = Arage or Orage all yelow lefe & stalke sum men call hym Medlus he is comynly in gardyns & gud for the pote & colorette as saffern & is callyd red melde. "Atriplex—Orage or Arache (Agg.). Arach Arage or Orach *Atriplex hortensis* (B. & H.).

Orpy = Orpies = Orpine or orpy = *Sedum Telephium*.

Owynys and Oynet = Onion—*Allium cepa*.

Parrow ?? Cannot identify. ? mistake for Yarrow.

Pelyter = Pellitory = *Parietaria officinalis*. "Piretrum domesticum is called pelletorye" (Agg.).  
 "Piretrum agreste is wyld pelletorye" (Agg.). Wild Pelletay = *Achillea Ptarmica* (B. & H.).  
 "Piretrum = Pelletarye of Spayne (Agg.). P. of Spayne = *Anacyclus Pyrethum*  
 (B. & H.). Peletir = *Parietaria officinalis* (B. & H.). Pellitory of the wall (B. & H.).

Percely = Perselye = parsely = *Petroselinum sativum*.

Pere = Pear = *Pyrus communis* and all its garden varieties.

Peruyinke = Periwinkle = *Vinea major* & *V. minor*.

Primrole = Primrose = *Primula vulgaris* or *Ligustrum vulgare* or *Bellis perennis* (B. & H.).  
 "Herbe Petyr . . . is called herba paralasis & in englyshe cowslope or prymrose"  
 (Agg.). "Primula veris is peralasis herba prymerose" (Agg.). "Ligustrum is  
 primyrose or cowslope" (Agg.). In this case it is clearly *primula vulgaris*, as we have  
 cowslyppe also.

Polypody = *Polypodium vulgare*. "Polipodium is polypodye fearne fenogreke that grot . . in  
 an ooke" (Agg.).

Pympernold = Pimpernel. *Fimipinella saxifraga*—*Poterium sanguisorba*. *Prunella vulgaris*  
 or *Anagallis arvensis* (B. & H.). "Pympernell is Burnet & is much lyke to  
 saxyfrage w<sup>c</sup> is callyd ryndle grasse Burnette—pipinella Pympurnell" (Agg.). "Ipia  
 major is pympernell or waxworte Ipia minor is chykmete" (Agg.). "Burneta anglice  
 burnett or pympernell he berythe a blew floure as it wer hayrove or heyhove & levys lyke  
 jutsane but not so large . . . ther be ij kyndes on groweth in medows & hathe lytle levys  
 the other in harde gronde & hathe lesse levys" (Agg.).

Radysche = Radish = *Raphanus sativus*. "Raffanus radyshe or turnepe" (Agg.).

Redenay. Cannot identify.

Rewe = Rue = *Ruta graveolens* = "Ruta is called Rewe or herbe grase" (Agg.).

Rose = Rosa, red & white. "Rosa is callyd Rose & ther is red & whyte" (Agg.).

Rybwort = Ribwort = *Plantago lanceolata*. "Plantago minor is Rybworte" (Agg.). "Jacen  
 alba is scabiosa minor is wylde tansye or gosegrasse or rybworte" (Agg.).

Saferowne = Saffron = *Crocus sativus* the stamens of which are the saffron of commerce.  
 "Crocus anglice saforne comynly knowen" (Agg.).

Sage = *Salvia officinalis*.

Sanyele = Sanicle = *Sanicula Europæa*.

Sauerey = Savory = *Satureja hortensis* or *Satureja montana*.

Scabyas = Scabious, varieties of *Scabiosa*. "Scabiosa men call Scabyose . . . there be ij kyndes  
 of hym" (Agg.).

Seueny = Senieue = *Sinapis nigra*, *S. alba* or *S. arvensis*, "common mustard or field senive"  
 (Gerard). Under mustard, Gerard gives "common mustard or field senuie, names Latin  
*Sinapi*, the rude & barbarous *Sinapium*, Germans *Senff*, the Frenchman *Seneve* &  
*Moutarde* . . . & some have called it *Saurion*." *Sinepi* (T's. Herbal). *Senvie* or  
*Senvy* = *Sinapis* (B. & H.).

Sowthrynwode = Southernwood = *Artemisia abrotanum*.

Sperewort = Spearwort = *Ranunculus Flammula*. "Flamula major is Sperworte or lancele" (Agg.). "Lancea lata is sperworte" (Agg.).

Spynage = Spinach = *Spinacia oleracea*. "Spinachia spynage" (Agg.).

Strowberys = Strawberries = *Fragaria vesca* (Agg.).

Stychewort = Stichewort *Stellaria Holostea* (B. & H.). "Lingua avis-pigelis, stychwort or byrdestonge or pyngle" (Agg.).

Tansay = Tansy = *Tanacetum vulgare*.

Totesayne = Tutsan = *Hypericum Androsæmum* (B. & H.). "Tutsane or parke leves, hit hathic leves lyke Arage . . . and hathic senows on his leves lyke waybrode & yelow flours & black berries at the toppe when they be ripe or elles yelow." "Agnus castus Tutseyne or parke leves" (Agg.).

Tuncarse = Town cress = *Lepidium sativum*.

Tyme = Thyme = *Thymus serpyllum*.

Valeryan = "A general name for Valeriana, especially *V. officinalis* also *Polemonium cœruleum* (B. & H.) or *Centranthus ruber*." "Valerian or Selfhele or lurkadyse. Anantilla" (Agg.).

Verueyn = Vervain = *Verbena officinalis*. "Centr' galli verbena, vervyn" (Agg.).

Violet = *Viola* = generally *V. odorata*. "Viola anglie vyolet ther be iij kindes" (Agg.).

Vynys and Vyne tre = Vine. *Vitis vinifera*.

Walwort = *Parietaria officinalis* or *Sedum acre* or *Sambucus Ebulus* or *Cotyledon umbilicus* (B. & H.). "Ebulus is walworte, Ebulus minor the lesse walworte" (Agg.). "Walwort or Danewort or Dwarf elder. Ebulus" (Gerard).

Warmot = Wormwood = *Artemisia Absinthium*. "Warmot is wormewood" (Gerard's App.).

Waterlyly = Water lily = *Nymphaea alba* or *Nuphar luteum*.

Weybrede = *Plantago major*. "Plantago is plantayne or waybrode" (Agg.). "Cloutouerina—Plantago is waybrode & in latyn is callyd Agni lingua & Arnoglossa is plantayne or weybrode" (Agg.).

Woderofe = Woodruff = *Asperula odorata*.

Wodesour = Woodsour = *Oxalis acetosella* or *Berberis vulgaris* (B. & H.). "Alleluya anglie wodsowre or stubworte he hathic levys of the w<sup>ch</sup> ij be rounde a lytle departyd above & berythe a whyte floure . . . he groweth in woddess muche" (Agg.). Stalewort = *Oxalis Acetosella* (B. & H.).

Wurtys or Wortys = *Brassica oleracea*. "Brassica . . . wortess aut cole aut colewortes" (T.'s Lib.) "Brassica i. callis, oleris." "Cole is named . . . in Latin brassica . . . of the common wryters and apothecaries caulis" (T.'s Herbal).

Wylktesyl = Teazel = *Dipsacus sylvestris* or *D. fullonum*.

Ysope = Hyssop = *Hyssopus officinalis*. "Ysopus is ysope" (Agg.).

XI.—*The revision of the Statutes of the Order of the Garter by King Edward the Sixth.*

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By the most gracious permission of Her Majesty the Queen, I bring before the Fellows of the Society two MSS., the one in Latin and the other in English, of one of the several draft schemes which were drawn up in the reign of Edward the Sixth for a revision of the Statutes of the Order of the Garter. They present the new Statutes as submitted at a Chapter on the 24th of April, 1552, with subsequent alterations and additions made by the king himself and by Sir William Cecil, Chancellor of the Order, with a view to submission to a later Chapter.

I may first briefly state that the Latin MS. was recently sent as a present to Her Majesty by her grandson the Grand Duke of Hesse, who purchased it by chance in Berlin. Mr. Richard Holmes, the Queen's Librarian, at once recognised it as a companion to the English MS., which belongs to the Royal Library at Windsor; and we may conjecture that it also once formed part of the royal collection, although it was never apparently bound with its companion volume. It could not, however, have entered the Windsor library before the eighteenth century, for it belonged to John Anstis, Garter King of Arms from 1718 to 1745.<sup>a</sup>

<sup>a</sup> The identification is quite clear from a note in his *The Register of the most noble Order of the Garter* (London, 1724) i. 439: "And in Truth the Collector (Anstis himself) hath a very fair Exemplar of Statutes illuminated on Parchment, dated at first on this 24 Apr. through which Words a Stroke is drawn with a Pen, and instead thereof in the Margin the following ones, *Windeecorie*, 28 Sept. are entred with this King's own Hand, with several other Alterations made in the like Manner." Anstis is not quite accurate; the word *Windeecorie* is not in Edward's, but in Cecil's, hand.

The history of the revision of the Statutes of the Garter in the reign of Edward the Sixth has been given generally by the historians of the Order, and more particularly by Gough Nichols in the *Literary Remains of King Edward the Sixth*, edited by him for the Roxburghe Club in 1877; but the course of development of the revision has not hitherto been traced in detail. With the aid of the two MSS. now before us, I propose to trace this development, and to give at the end of this paper both the English and Latin text contained in them.

"Among *Societies* in general," says Ashmole in his *Institution, Laws, and Ceremonies of the Most Noble Order of the Garter*, "it hath been found expedient, to plant *Rules* for them to walk by: Order and Regularity being not only the beauty and Symmetry of Government, but the parent of that Being, which greatly contributes to their perpetuity;" and it was "upon such like considerations that that most famous, happy, and victorious Prince, King *Edward* the Third, did prudently devise and institute several laudable Statutes and Ordinances to be duly observed and kept within the said Order."<sup>a</sup> These Statutes held good until the reign of Henry the Fifth, "that happy restorer of the honor of the Order," who, "having found its glory upon abatement, not only raised it to its former lustre, but very much increast the honor thereof,"<sup>b</sup> revising and adding to the original ordinances. Next, "the last and largest *Body* was undertaken and compleated, by that munificent increaser of the splendor of this most Noble Order, King *Henry* the Eighth; chiefly in regard some of the former *Statutes* were obscure, doubtful, and needed further explication; others wanted reducing and contraction, where the necessity of the case required."<sup>c</sup> The Statutes of Henry the Eighth were passed in 1522.

I will now quote verbatim Ashmole's account<sup>a</sup> how "King Edward the Sixth went about to alter and reform such things in the preceding statutes as seemed not consistent with the religion he had established in England":

"At a Chapter holden at *Greenwich*, the 23. of *April* in the 3. year of his Reign [1549], it was agreed, That the Lord *St. John*, the *Earl of Arundel*, and *Sir William Paget* should peruse over the Statutes of the Garter; and that the same should be reformed, and made agreeable to the Kings Majesty's other proceedings, by the advice of the *Duke of Somerset* Lord Protector, and other Companions of this Noble Order.

This was seconded by another Order, made also in Chapter at *Greenwich*, on *St. Georges* day in the following year [1550]; where it was agreed, That the Book of Statutes should be reformed, and thereupon the Sovereign delivered to the whole Company, a Book, wherein was

<sup>a</sup> Elias Ashmole, *The Institution, Laws and Ceremonies of the most Noble Order of the Garter*, (London, 1672), 190.

<sup>b</sup> *Ibid.* 191.

<sup>c</sup> *Ibid.* 192.

contained certain Statutes, by the same to be corrected and reformed as they thought best, until the next Chapter.

But it seems, nothing was as yet done, in pursuance of either of these *Orders*, for at the next Feast, on the 24. of April, anno. 5. E. 6. [1551] another *Order* past, empowering the Duke of Somerset, the Marquess of Northampton, the Earls of Warwick, Arundel, Bedford, and Wiltshire, to peruse over the Statutes and other Books of the Order, and the same to be reformed, as aforesaid.

This third *Order* it seems took more effect than the former; for thereupon a new Body of Laws was collected together (wherein some things were reformed, others newly added; but in effect the *Laws* of the Order very much altered) and published March 17. anno 7. E. 6. [1553] But this King dying within four Months after, the very first thing Queen Mary (his Sister) took care for, in reference to the Affairs of this Order, was to see these new Statutes abrogated and made void.

To which purpose in a Chapter held at St. James's House, the 27. of September next following her coming to the Crown, it was among other things Decreed and Ordained, That the said Laws and Ordinances, which were in no sort convenient to be used, and so impertinent and tending to novelty, should be abrogated and disannulled; and no account to be made of them for the future.

And for the speedy execution of this Decree, command was then also given to Sir William Petre (who that day was admitted Chancellor of the Order) to see, that they should be speedily expunged out of the Book of Statutes, and forthwith defaced; lest any memory of them should remain to posterity: and only those Decrees and Ordinances, which her Father, and his royal Predecessors had established, should be retained and observed.<sup>a</sup>

From this account of the proceedings it appears that the question of revising the Statutes of the Order of the Garter first came before the Chapter of 1549, and that it came up again in 1550 when the Sovereign delivered to the whole company "a book wherein was contained certain statutes," with a view to "correction and reform." What this book may have been we do not know, but it is not improbable that it contained the Statutes in the form in which they appear in the copy<sup>b</sup> written for Sir William Herbert, who was elected in December, 1549: that is, a modified form of Henry the Eighth's Statutes of 1522, which, as Sir Harris Nicolas observes,<sup>c</sup> while they contain many material alterations, "certainly do not appear to have been framed with any reference to the change which had taken place in the Religion of the Country." At the same time it is to be noted that an important modification of the religious ceremonies had been already sanctioned at the Chapter of the 22nd April, 1548.<sup>d</sup>

<sup>a</sup> Ashmole, 194.

<sup>b</sup> Now in the British Museum, Add. MS. 6288.

<sup>c</sup> *History of the Orders of Knighthood of the British Empire* (London, 1842), i. 173, 174.

<sup>d</sup> J. G. Nichols, *Literary Remains of King Edward VI.*, Roxburghe Club (London, 1857), ii. 511.



The alterations, as found in the Herbert MS., may have been the result of the revision of the three knights who were named in the Chapter of 1549 "to peruse over the Statutes of the Garter."

Ashmole next brings us to the Chapter of the 24th April, 1551, when a larger committee of six knights was appointed to revise the statutes; and he then goes on to the final result in the passing of the new statutes in 1553. He was not in a position to tell us what, if anything, was done between the Chapters of 1550 and 1551, and through what stages the revision passed between 1551 and its final acceptance in 1553. I will attempt to supply this omission, and in doing this I shall investigate the very interesting subject of the personal part which the young king took in the work.

We have five documents connected with the revision of the Statutes of the Garter which originated with the king or passed through his hands. Three of them are entirely in his handwriting, and, we may presume, are of his own composition; the other two are the MSS. before us, the Latin and English versions of the statutes as considered and passed at the Chapter of the 24th April, 1552, with subsequent alterations in the Latin text by the king and Cecil and in the English text by the king alone.

The three holograph documents are those which are bound up, together with other original papers, by Edward, in the Cotton MS., Nero c. x., in the British Museum, and which have been printed by Gough Nichols in his *Literary Remains of King Edward the Sixth*,<sup>a</sup> with the title "Three Schemes for remodelling the Statutes of the Order of the Garter, 1550 or 1551." Two are in English, the third is in Latin.<sup>b</sup> The first English scheme varies in many points from the second and from the Latin scheme; the second English scheme and the Latin scheme run more nearly on the same lines. The first English scheme is dated in the fourth year of the king's reign (*i.e.* from 28th January, 1550, to 27th January, 1551) but the day and month are not filled in. The second English scheme bears no date. The Latin scheme leaves the year open, 155—. Nichols thinks that it was evidently during the fourth year of his reign "that the young Sovereign of the Order engaged himself in the composition of the following papers," and he suggests that the king's scheme may have been represented in the Book of Statutes which was brought by Edward before the Chapter on St. George's Day, 1550. There is, however, internal evidence which seems to show that the first

<sup>a</sup> ii. 511.

<sup>b</sup> Burnet printed the Latin scheme in the Appendix to his *History of the Reformation* and dated it correctly in 1551.

English scheme was not composed until after this date, and that the second English and Latin schemes were not written till the following year. The paper which was used for the first English scheme is of the same make as that used by Edward for his journal in the latter part of the year 1550 and early in 1551, and not before; the paper of the second scheme is that used in the journal from April to July, 1551, and not before; and half of the Latin scheme is on the same paper, although the other half is on a sheet of older use.

It is not wise to lay too much stress on an argument for a date which depends on the age of the material on which a document is written; but those who know how rapidly different makes of paper succeeded each other at this period will be inclined to allow due weight to such extraneous means of fixing dates. It has been shown above that the statutes submitted in April, 1550, may have been those represented by the Herbert MS.; and I think it probable that Edward's first English scheme was written towards the close of that year, and possibly that it was laid before the Chapter of April, 1551, when, as we have seen, a larger committee was named to continue the revision.

It is to this first scheme that the general remarks of Gough Nichols are particularly applicable, for the details respecting the charitable disposal of fees and contributions, to which he refers, disappear from the next scheme. The young king's schemes, he says,

"are characterised by the earnest Protestantism of the early part of his reign, while Cranmer and his coadjutors were encouraged by more sincere and serviceable support than they subsequently received from the leading members of the Council. In these schemes we find the king not only conscientiously anxious to purge the Order of all papistical and superstitious practices, but entertaining the ulterior view of making the institution subservient to some objects more valuable than mere personal distinction, or even that loyal and chivalric association which had been its ancient boast. In order that it might promote the religion, learning, and general improvement of the country, its accruing revenues were to be devoted to the maintenance of scholars at the universities and the amendment of highways and making banks upon rivers. On the demise of the existing canons and queristers, their incomes were to be diverted to the pay of itinerant preachers. The very name of St. George was to be suppressed, and the order called merely the Order of the Garter or Defence of the Truth as contained in Holy Scripture."

Edward's second English scheme and his Latin scheme, as already observed, run more nearly together. They were probably written in the middle of the year 1551, the English being a revision of the first English scheme, and the Latin being a subsequent revision of the second. They must have been made with a view to the consideration of the statutes at the Chapter to be held on

St. George's Day in 1552. But it does not appear that even the Latin scheme represents the statutes as submitted to that Chapter. There was at least a further revision for that occasion, a fragment of which exists in a volume of papers in the British Museum (Add. MS. 6298, f. 77) relating to the Order of the Garter and once belonging to Anstis. This fragment, consisting only of two leaves, contains a portion of the preamble in words differing from Edward's Latin scheme, and the concluding words of the statutes. The preamble has considerable alterations by a second hand, and the fact that these alterations are embodied in the text of the Queen's MS., which is the fair copy of the statutes which passed the Chapter of the 24th April, 1552, proves that in this fragment we have either the revision which was actually submitted to that Chapter for consideration, or at least one which lies between Edward's Latin scheme and the Queen's MS.

As compared with Edward's Latin text, that of the Queen's MS. is fuller, but it runs on the same lines. Why there should have been also an English version of it, as seen in the second MS. before us (which I will call the Windsor MS.), it is difficult to conjecture. Probably the king himself had some trouble in making up his mind as to which language he would choose. We have seen him writing two schemes in English, and then taking to Latin; and in the end the statutes which were finally passed in 1553 were, as we shall see, drawn up in English.

Let us now examine some of the points of the statutes of the 24th April, 1552, as seen in the Queen's and the Windsor MSS. before alteration. The preamble tells us how the kings of England, in order to "advance to honour and glory good, godly, valiant, well-couraged, wise, and noble men," desired such men, "in a token of concord and unity, to tie about their legs a certain garter"; and how that serpent Satan, when he saw that this noble order "enkindled men so much to virtue," craftily "stuffed the statutes of this fellowship with many doubtful, superstitious, and repugnant opinions." These historical considerations have moved the king, who, we must bear in mind, was then in his fifteenth year, "to study with all his travail to reduce the Order to its pristine and ancient foundation."

The order is to be styled the Order of the Garter, and not the Order of St. George, "lest the honour which is only due unto God should be thereby abused." By the first English scheme (which I will call Scheme 1) it was to be named "The Order of the Garter or Defence of the Truth wholly contained in Scripture." The second English scheme (or Scheme 2) was content to leave out the words after "Truth." The Latin scheme (or Scheme 3) had simply "Ordo Garterii."

Next arises the very interesting point of the insignia, which seems to have

caused infinite searchings of heart. St. George being deposed, there was every objection to keeping up even the recollection of his name. By Scheme 1, then, the "George" was to be "a king [from a subsequent correction it seems that Edward probably intended to alter this word] graven, holding in one hand a sword, and in the other a book; and upon the sword shall be written *Iustitia*, and upon the book *Verbum Dei*." Scheme 2 enjoined "a horseman, graven, holding in one hand a sword piercing a book, on which shall be written *Verbum Dei*, and on the sword *Protectio*, and in the other hand a shield, on which shall be written *Fides*, which device shall have a garter about it, on which shall be written *Assumite universam armaturam Dei* [these words are erased and replaced by] *Hony soit qui mal y pense*." Scheme 3 followed Scheme 2, except that it omitted the garter. But at the Chapter of the 24th April, 1552, as appears from the Queen's and Windsor MSS., the knight was evidently thought to savour too much of superstition, and was therefore replaced by a very simple device: "the Order of the Garter, wherein shall be a shield of gold, enamelled of blue on the one side, whereon shall be written in golden letters *Scutum Fidei*; on the other side shall be made a red cross, which is the English cross, that side of the shield being white." In the previous Latin scheme (Scheme 3) we find that an apology for the retention of the cross in the arms of the Order (which it will be noticed is here rather obtrusively described as the English cross) was at first thought necessary to soothe Protestant feelings. The young king there gave three reasons why the cross should be kept: (1) because it was not the special ensign of St. George, and it is a mere fable that he ever bore it; (2) on account of its antiquity; and (3) because its suppression would cause a universal change, it being the ensign of English soldiers, and such changes should not be made without cause. All this was, however, erased. For convenience we may here carry the history of the "George" beyond the Chapter of 1552, by stating that better counsels prevailed in the end, and that the king himself altered the design; the paltry Shield of Faith was got rid of, and "the picture of an armed knight on horseback, with a sword, with a garter of gold enamel," was restored.

By Scheme 1 the number of knights was to be 26 English and 4 foreign; by Scheme 2 it was to be only 26 with the Sovereign, "because the more come to it the less honour it is esteemed"; by Scheme 3, at first 26, then 25, then 24, besides the *Prefectus*; by the Queen's and Windsor MSS. 25, besides the Sovereign.

By the earlier schemes the quorum of a Chapter was to be six, besides the Sovereign; in the Queen's and Windsor MSS., 12 knights were required for

alteration of the statutes, six for an election. The general quorum of six was afterwards restored.

The Queen's and Windsor MSS. provide for the expulsion from the Order of those knights who shall have been elected without proof of gentle descent, besides those who are convicted of crime, as provided by the previous schemes.

The regulations for installation are generally the same in all the schemes, but vary in regard to the religious part of the ceremony. The changes which the king contemplated after the Chapter of April, 1552, will be noticed presently.

The Festival was removed under Scheme 1 to 30th November—1st December, because (a strange reason) "the feast of St. George is too near the summer," and because "it is a feast not meet to be kept," and "because of dedicating to him shall come both idolatry and also superstitiousness and hypocrisy, mother of all vice." Scheme 2 fixed the same date. Scheme 3, the first Saturday and Sunday in December, or, if the first day of December fell on a Sunday, then the following Saturday and Sunday. But in 1552 the festival was removed to Whitsuntide.

All notice of the choristers and canons and the poor knights, who had been referred to in previous schemes, is now omitted.

We next proceed to the fees, and the officers of the Order, and the seal of the Order. And here the struggle between old and new ideas is repeated. According to Scheme 1, the seal was to have on the obverse the arms of England, with the legend *Verbum Domini manet in æternum*, and on the reverse "a king, graven, as the knights wear about their necks," and a garter with the superscription *Hony soit qui mal y pense*. By Scheme 2 it varied in having *Hony soit*, &c., instead of *Verbum Domini*, &c., on the obverse. Scheme 3 required the arms of England and France together with [i.e. impaling] those of the Order, with the legend *Verbum Domini*, &c., on the obverse, and the "equitem sculptum ut milites gestabunt," within a garter, on the reverse. The Queen's and Windsor MSS. have the same obverse; but, on the reverse, the ensign of the Order within a garter. Afterwards, the old motto of the Order happily prevailed over the *Verbum Domini*, &c.

The duties of the officers are more fully described in these two MSS. than in the previous schemes: and, to conclude these observations, it is to be noted that foreign knights are not required to discontinue wearing the old "George," if they shall have already received it.

Both the Queen's and the Windsor MSS. are written on vellum, measuring about  $9\frac{1}{4}$  by  $6\frac{3}{4}$  inches. The Queen's MS. consists of eight leaves, the Windsor MS. of seven leaves. The former is written in the Italian style, the latter in the



English legal hand. Both are ornamented in the same way, having on the first page a gilt border imitating a carved frame, with the arms of England and France, quarterly, impaling those of the Order, within the Garter, at the foot; and above, three shields, the centre bearing the arms of England and France within the Garter, that on the left the "the cross of the English," and that on the right being no doubt originally the unfortunate "*Scutum Fidei*," but in both MSS. it is defaced. I venture to hope that the young king used his own hand in this obliteration, and that for once this most precocious young prince may have felt the boy's natural pleasure in a work of destruction.

As already stated, the Queen's MS. contains subsequent alterations made by the king himself and by Cecil, and the Windsor MS. alterations by the king alone. They were made with the view of being submitted to a Chapter to be held at Windsor on the 28th September, 1552, although the king had already recorded in his journal, under the date of 24th April, 1552, that "The ordre of the Garter was holli altered, as apperith by the new statutes,"<sup>a</sup> and probably at the time intended these "new statutes" to be final. From the nature of certain of the alterations in the Windsor (English) MS. it seems that that text was, in part at least, the first to be altered. When the king had carried on his alterations to a certain point he appears to have taken up the Queen's (Latin) MS. and entered in it corresponding alterations in Latin. He then, probably, handed over the latter MS. to Cecil, and himself returned to the Windsor MS. and made further alterations, all of which, however, were not repeated in the Queen's MS. The alterations in the Windsor MS. are thus more numerous than those in the Queen's MS. With regard to the alterations made by Cecil, it is enough to state that, with a few exceptions, they are mere improvements of grammar or style in the Latin text.

The first alteration to be noted is the change of date, Edward altering the 24th of April into the 28th of September; and Cecil adds in the Queen's MS. "*Windsorix*" as the place of session. Next follow the important alteration respecting the "George," already referred to; and the reversion to a quorum of six for a Chapter. Next comes a small alteration in the Windsor MS. which does not appear in the Queen's MS., and which was probably one of the later corrections. The knights, at an election, are to wear "*Mantels only*," instead of "*Roobes*."

But much more important changes are made in the following paragraphs. It appears from the Windsor MS. that simple investiture of the elected knight

<sup>a</sup> *Literary Remains*, ii. 411.



with the "George" and Garter was to suffice; and, accordingly, at the end of the paragraph (10) relating to that ceremony, the king added: "and this done he shal be rekened as a parfaict knight of th' ordre," cancelling the paragraph (11) relating to the installation at Windsor, and altering the opening words of the next paragraph (12) so as to make the oath succeed the election. To follow this paragraph he then added a regulation for provision of the robes and payment of fees by the elected knight and for the setting up of the "hatchment" in his stall. But as this was now to be the completion of the ceremonies, he proceeded to strike out the words which he had just written at the end of paragraph (10) and added similar words to the end of this last regulation, viz.: "This don, he to be reconed a parfaict knight of th' ordre without eny further stallation." Now, turning to the Queen's MS., we find the alteration entered there in the revised form—a proof that the alterations in that MS. were subsequent to the corresponding alterations in the Windsor MS. A later further addition at the end of paragraph (10), in the latter MS., provides for the return of the book of the statutes after the knight's decease.

We next notice alterations in the tables of fees, or rather alms (21). The first table was originally that of fees payable on the death of a knight; the second, of fees payable on "creation." The first is now altered to apply to "election."

After this, alterations in the king's hand cease in the Queen's MS., but continue in the Windsor MS., as will be seen by reference to the accompanying text. Alterations corresponding to two in the latter, viz.: the directions for the robes and badge of the Chancellor and the change of the motto on the seal, are entered in the Queen's MS. by Cecil; and it is probable that he intended to complete in it the king's remaining alterations.

Whether the Chapter for which this revision was intended was ever held on the 28th September, 1552, we cannot be certain; it has at least been doubted whether it was held at Windsor, for on that day the king was "removing to Hampton Court."<sup>a</sup>

To conclude the history of Edward's revision: A MS. in the Public Record Office carries us a step farther (*Domestic, Edward VI.* vol. xvii.). It is a new scheme of the statutes, ornamented with small shields of arms.<sup>b</sup> The text opens

<sup>a</sup> *Journal, Literary Remains*, ii. 459.

<sup>b</sup> The shield, which is defaced in the Queen's and Windsor MSS., here contains the mounted knight.

in the same way as in the Queen's MS., and incorporates the alterations of the preamble; but from this point it is different, and the whole MS. is full of corrections in Cecil's hand. At the end is the note: "*Rudimenta sunt hæc ordinis, quæ potius colliguntur quam componuntur. Gulielmus Cæcilius, Ord. Gart. Cancellarius, 29 Decemb. 1552, sexto Re. Edw. Sexti.*" The original date of the text was Windsor, 28th September, 1552, but this is altered to Westminster, 17th March, and the regnal year is altered from "sexto" to "septimo." It appears then that in the Record Office MS. we have the statutes in the next stage after the Queen's MS., beginning on the lines of the latter as corrected, but almost immediately diverging into a new text, and corrected for submission to a Chapter to be held at Westminster on the 17th March, 1553. The fact that it bears the original date of the 28th September seems at least to suggest that a Chapter was actually held on that day.

But this MS. does not represent the final stage of the revision for the Chapter of 1553. The statutes are here in Latin; as at last adopted, they were in English. We turn to a MS. at Oxford to find the last step in the history of Edward's revision. This is the Ashmole MS. 820, which contains statutes drawn up in English much amplified and originally dated, as in the case of the Record Office MS., the 28th September, 1552. But the date is altered for the Chapter of 1553, and corrections are made in a hand which is said to be Cecil's. The statutes are those adopted on the 17th March, 1553.

Edward's Statutes thus at length finally accepted have been printed by Anstis,<sup>a</sup> and copies of them still exist in MS. We have already seen the fate which overtook them. They were in force for just six months. Edward died on the 6th July, and Henry the Eighth's Statutes were restored on the 27th September following.

The English and Latin texts of the Windsor and Queen's MSS., which now follow, are printed on opposite pages. The king's alterations appear in italics, those of Cecil in Roman type. For convenience of reference, numbers within brackets have been added in correspondence with those attached to the paragraphs of Edward's previous Latin scheme, as printed by Gough Nichols.

<sup>a</sup> *Order of the Garter*, Appendix, No. xiv.

[*The Windsor MS.*]

EDWARD THE SYXT, by the grace of God kinge of Englande, France, and Irelande, defendour of the faith and in yearth of the churche of Englande and of Irelande the supreme hedd, To all that shall see these presentes gretinge.

Our most noble progenitors, kinges of Englande, studiyinge and considering with themselves of the duetie they ought to shewe towards God, their contrye, and those that be vnder their obeysaunce, They sone founde that nothing dyd so much bilonge to their office as to aduance to honor and glory good, godly, valiant, well couraged, wise and noble men for their notable desertes, and to nourishe a certaine amytie, fellowship, and agrement in all honest thinges among all men, but specially among equalles in degre, for they do iudge honor, as surely it is, the rewarde of vertue, and concorde the fundation and enlarger of common weales.

These thinges whenne they had wayed, they thought it best to make a certaine felloship, company, and assemble of those that had very well borne themselves at home in matters of peace, and had tryed themselves valiant and wise abrode in martiall feates.

And suche men they deuysed, in a token of concorde and vnitie, to tie abowte their legges a certaine gartier, as though therby they shulde witnes that for their contrey, religion, and Goddes cause they wolde spende their lief and goodes, and for this cause they called it thordre of the garter.

Whiche ordre, being of all mens mouthes commended, that serpent Satan, aduersary to mankinde, dyd seeke holly to distroye, whenne he beheld it inkindeled men so much to vertue.

Wherin so much he trauayled, so diligently he tended his praye, so craftily and conningly he deceyued men, that at lenght he stuffed the statutes of this fellowship with many doubtfull, superstitious, and repugnant opinions.

[The Queen's MS.]

EDVARDUS SEXTUS, Dei gratia Angliæ Franciæ et Hiberniæ Rex, fidei defensor, et in terra ecclesiæ Anglicanæ et Hibernicæ supremum caput, Omnibus ad quos presentes littere uenerint salutem.

Maiores nostri illustrissimi, Angliæ Reges, quum diu multumque secum cogitarent, et animi attentione expenderent, quales se erga deum religionem, erga patriam pietate, erga suos bonitate prestare deberent, intel-

cum illorum officiis coniunctius

lexerunt nihil magis uel decorum uel officiosum illis esse, quam ut bonis, piis, fortibus, magnanimis, sapientibus et celeberrimis uiris gloriam et honores amplissimos attribuerent, amicitiamque quandam concordem et comunem societatem rerum honestarum inter omnes, maxime uero inter pares, alerent et conseruarent. Judicabant enim honorem (ut re uera est) uirtutis esse premium concordiamque reipublicæ fundamentum et incrementum.

Ista quum essent a maioribus nostris considerate perpensa, optimum esse duxerunt ut eorum uirorum qui se et domi in pace bene ac honeste gesserant, et foris in bello fortes ac prudentes prestiterant, quedam esset societas, communio, et tanquam collegium, atque horum tibiis paulo infra genu ad poplitem fasciam quandam fibulatam addi uoluerunt, tanquam symbolum concordie et unitatis, quo quidem nexu testarentur omnibus se semper paratos fore pro patria atque religione non solum sua sed semet etiam omnemque vitam acri et forti dimicatione profundere. Hanc ob causam istam consociationem appellarunt uernacula lingua ordinem Garterii.

Verum uetus ille serpens Satan, humano generi semper infensus, huic ordini (quem ~~omnes mortales~~ et domi et foris certatim uidit multa cum

ab omnibus i

laude <sup>et</sup> predicare) adeo inuidebat, ut tantam uirtutis facem et lumen funditus delere ac antiquare studuerit, cum presertim videret tot fortes uiros huius honoris studio quasi calcare quodam ad ueram uirtutem capessendam incitatos. Eoque tam astute animos hominum excæcando spe predandi progressus est, ut tandem huius societatis et collegii statuta multis

obscuris superstitionis et inter se pugnantibus opinionibus <sup>com</sup>adimpleret et <sup>re</sup>offerierit.

[The Windsor MS.]

But We, being greatly moued with thantiquitie, with the Maiestie, and with the godlines of this ordre, haue studyed, with all our trauaile, to reduce it to the pristine and auneynt fundation.

28 of September

Wherefore, at a chapter holden the ~~xxiiij<sup>th</sup>~~ daye of Aprill, in the yere of our Lorde m'ccccclij, and in the sixt yere of our reigne, wher many knightes of the same ordre were present, It was enacted by vs, whose names be subscribed to the foote of thes ordynaunces, with thassent of the same knightes, that these articles within written shalbe truly obserued as the statutes of this ordre.

## THE STATUTES.

[1] FYRSTE, it is establisshed and enacted that this ordre from hensforth shalbe called thordre of the garter, and not the ordre of Sainct George, lest the honor which is onely dew vnto God shulde be therby abused.

[2] Item, the knightes shall weare abowte their lift legge a garter, wherin shalbe ~~written~~ HONY SOIT QVI MAL Y PENSE. And aboute their neckes shall weare vppon a blacke lace or small cheyne ~~thordre of the garter, wherin shalbe a shilde of golde, enameled of blew~~ on the one side, wheron shalbe written in golden letters, SECVTVM FIDELI, on thother syde shalbe made a redde crosse, ~~whiche is thenglishe crosse, that syde of the shilde being white.~~

And seing this honor is taken from Sainct George, that he shalbe no lenger

Patrone of thordre, the knightes shall weare no more that ~~Sainet~~ <sup>picture after</sup> ~~Sainet~~ <sup>the feast of Whitsontid</sup> ~~Michaelmas~~ next comming.

[3] Let tharmes of thordre remayne in the same state they dyd, That is to saye, a redd crosse in a feld of syluer.

[4] The nombre of the knightes shalbe xxv., bisides the Soueraigne, ~~for if ther shulde be more, it wilbe thenne had in lesse estimation to be a fellow of thordre.~~

[5] That the king of Englande, his heires, and successors shalbe soueraines of this order, as he hath wont to be heretofore.

And bicause dowbtes, contentions and alterations many tymes do often

contained in  
embraudery or  
lettars of gold  
this sentence  
the picture of an  
armed  
~~man~~ knight on  
horsbake w<sup>th</sup> a  
sweard, with a  
garter of gold  
enamel.  
picture

[The Queen's MS.]

Huic tante subdoli hostis <sup>peruersitati</sup> malignitati ut occurreremus, magnopere nos commo-  
uere ordinis huius antiquitas, maiestas, et ipsa bonitas, adeo ut omne nos-  
trum studium, laborem, et operam in eo <sup>pristinam ad suam dignitatem et gradum</sup> restituendo ad pristinam suam digni-  
tatem et gradum collocanda duxerimus.

Itaque habito frequenti concilio seu capitulo <sup>24<sup>to</sup> Aprilis</sup>, anno a Cristo nato <sup>Windesoriae</sup>  
1552, et regni nostri sexto, vbi <sup>gna</sup> maior pars equitum huius ordinis con-  
uenerant, Statutum est et decretum a nobis <sup>eorum equitum</sup> (quorum nomina ascripta sunt  
<sup>assensu</sup> in calce horum scriptorum) assentientibus iisdem equitibus ut qui hic inscripti  
sunt articuli pro ordinis huiusce statutis diligenter obseruentur.

[1.] PRIMUM itaque decretum ac sancitum est ut hic ordo imposterum dicatur  
<sup>Diui</sup>

Garterii, non <sup>Λ</sup> Georgii, ne qui soli Deo debetur honos alteri deferatur.

[2.] Item, equites iidem sinistrum crus loro fibulato circumplicabunt, cuius  
hec erit inscriptio litteris aureis gallica, HONY . SOYT . QVE . MAL . Y . PENSE.  
Collo uero circumponent, fasciolę nigre serice torquie pusillo appensum,  
insigne ordinis garterii, Aureum nempe scutum cuius altera facies cerulea  
sit, aureis litteris inscripta, SCVTUM . FIDEI, altera uero alba sit, crucem  
rubeam, id est Anglorum crucem, pre se ferens.

*Imaginem nempe  
armati militis  
equo insidentis,  
garterio circum-  
datam, totam ex  
auro confectam.*

Et postquam hic honos S. Georgio ademptus <sup>fuert</sup> sit, ne ordinis istius patrocini-  
<sup>Pentecostes</sup>

illi imposterum ascribatur, illius effigiem equites a festo <sup>Michaelis</sup> iam  
proxime succedentis non gestabunt amplius.

[3.] Insignia ordinis (que arma vulgus vocat) eadem sunt que consueuerunt  
<sup>rubra</sup>  
esse, nempe crux rubea argenteo campo depicta.

[4.] Equites numero uiginti quinque sunt, preter principem, ~~ne, si numerus  
maior foret, ordinis minor haberetur estimatio.~~

[5.] Rex Anglię, heredes eius atque successores, supremus ac princeps esto  
<sup>et</sup>  
istius ordinis, uti antehac semper extitit. Et quoniam dubitationes quedam <sup>Λ</sup>



[*The Windsor MS.*]*of the fellows of  
th'ordre together*

chaunce, through which some statutes of this ordre may be eyther repealed, eyther expounded, or elles enlarged, and many tymes alsoo in the place of knightes that dye others must neades be chosen, Therfor it is agreed that the saide king of Englande, whenne any suche mattier happeneth, calling ~~twelve of the fellows of thordre together, and for the election~~ six, with their consent, in any decent place, shall chaunge, limite, adde, and withdrawe from this ordre, as shal seme good to him and them. And allso to chose into the stalles and vacant places some suche princes, noble men, or knightes, being gentilmen of blodde, bearing armes of the fathers syde and mothers syde from thre discentes, and shalbe also a knight bfore he shalbe chosen or elect to this fellowshipe, and withowte reproche of shamefull acte or deade.

*Mantels only*

- [6] All those that be founde giltye of capitall crymes, or cowardely haue fledde away in warre, or with any notable vice be spotted, though deathe be not executed on them, or such as, happeninge for lacke of knowlege of their linage and stocke to be admitted to this fellowship, shalbe duly after proued no gentelman, as is aforespecyfyed and declared, shalbe discharged and degraded of this saide ordre and fellowship.
- [7-9] The knightes assembled, hauing on their ~~Roobes~~, if any roome be voide, shall every one write the names of thre Princes, Emperors, Kinges, Archedukes, Dukes, Marquesses, or Erles, the names of thre Vicomtes, Barons, or lordes, the names of thre knightes, which comonly be called bachelor knightes, or bannarettes, being knightes withowt reproche and gentilmen of blodde, as is aforesaid, and their names being written and presented to the Kinges Maiestie, according to the auntyent custome, his hieghnes, soueraigne of thordre, shall chose any of them as shalbe thought moost mete.
- [10] The same knight or knightes that is chosen, being present, shalbe brought furthwith to the soueraignes presence by two of the fellows. The soueraigne of thordre shall put on his or their neckes a lace

[The Queen's MS.]

controuersiae, ~~ac~~ temporum <sup>que</sup> uicissitudines incidere sepe solent, propter  
 que nonnulla ordinis huiusce statuta aut rescindenda, aut explananda, aut  
 ampli<sup>fic</sup>anda sint, et sepe etiam alii equites in aliorum demortuorum locum  
 necessario sint cooptandi, Decretum est, licere predicto regi Angliæ (quoties  
 occasio dabitur) ~~duodecim ordinis sociis (uel sex eorum, si de cooptandis~~ <sup>sex ordinis</sup>  
~~novis militibus agatur)~~ <sup>sociis</sup> loco comodo conuocatis, ex eorum consensu, immutare,  
 definire, addere atque detrahare huic ordini, prout ipsi ipsisque uidebitur,  
 vacuasque in sedes ac loca huiusmodi Principes, viros nobiles, equitesue  
 substituere, qui, generoso sanguine nobilique genere nati, armorum insignia  
 ab utroque parente per tres totos gradus <sup>sumpserint</sup> duxerint, quique preterea equites  
 aurati existentes, priusquam in istud collegium acciti sint, omni uacent  
 ignominie nota atque infamia.

[6] Qui nefandorum scelerum <sup>conuicti</sup> rei comperti fuerint aut hostibus turpiter in  
 bello dedisse terga comperiantur, aut qui fœdæ alicuius turpitudinis notam  
 sibi inusserunt, etiam si capitis pœna non plectantur, aut qui denique, stirpis  
 et generis sui ignoratione admissi in collegium istud, ignobilitatis postea  
<sup>coarguentur</sup> ~~conuincuntur~~ (contra quam predicti statuti ratio exigit), ab istoc ordine et  
 societate dimouentur et expelluntur.

[7-9] Quandocunque locus aliquis uacet, equites ordinis, una coeuntes ac  
 honorariis uestibus induti, scribent per se singuli trium Principum, Impera-  
 torum, Regum, Archiducum, Ducum, <sup>ceu</sup> Marchionum, trium Vicecomitum,  
~~trium~~ Baronum seu dominorum, trium denique equitum nomina, quos vulgo  
 appellant equites Banarettos uel Baccalaureos, qui quidem minime infames  
 fuerint nobilibusque sint parentibus orti, ut est predictum. Quorum  
 nomina, quum conscripta fuerint et Regiæ Maiestati ex antiquo more oblata,  
 Excellentia sua, quum sit ordinis Princeps, ex hiis eliget quos maxime  
 dignos iudicauerit.

[10.] Equites ad hunc modum cooptatos (si fuerint presentes) duo ordinis  
 collegæ continuo deducunt ad ipsum regem. Is ubi collo ipsorum fasciolam

[The Windsor MS.]

signed w<sup>th</sup> the  
Soueraignes  
orne hand, w<sup>ich</sup>  
he ~~sh~~ shall caus  
his exectours to  
deliuer to Garter  
again at his  
death.<sup>a</sup>

and by this  
done he shal  
be reckoned as  
a parfaict  
knight of  
th'ordre.

† Also he shal be  
bound w<sup>in</sup> a  
month of his  
election to haue  
redy the mantel,  
cirtel, the  
collar hud, and  
collar, and also  
to pay the fees  
to the chaun-  
celour, the  
register, or  
Garter, and  
w<sup>in</sup> this month  
Garter shal set  
up the hache-  
ment in the stalle  
to him appointed.  
This don he to  
be reconed a  
parfait knight  
of th'ordre,  
w<sup>out</sup> eny further  
stallation.

or a small cheyne hauing thereunto thordre, and two of the fellows of the said order shall tye the garter abowte his or their left legge. Ther shalbe also deliuered to the knight electe a booke of all these statutes,<sup>a</sup>

- [11] The knight electe shall goo to Wyndesour, and the soueraigne of thorder shal send vnto him his lieutenaunt and two assistautes whoo shall place hym, if it maye be withowte preiudice to other knightes, in a stall fytt and conuenient for the degre of his nobilitie, and according to the olde custome he shall receue his roobes, commonly named the mantell, the kirtell and the huddle, and after he hath put on these Roobes he shall heare dyuine seruise in the stall appointed him, and receue, with the lieutenaunt and assistautes, the communyon.

pon his election

- [12] After prayers ended, he shall take his othe, that he will to his power mainetaine and defende all the dignities, titles, claymes and dominions of the king of Englande, soueraigne of the order, that he will, as muche as in him lyethe, defende, loue, and esteme the studentes of Goddes wourde, aduaunce Goddes glory and honoure, that he shall obserue the statutes of this order.

- [13]† Thorder that was enacted concerning the hatchementes, that is to saye of euery knightes bannar, helmet, creaste, mantell, and sworde, shalbe used as heretofore.

in al othir cas

- [14, 15] Further, seing the feaste of this ordre is altred from Sainet George, and lest we seme to take awaye the feaste of Sainet George in wordes onely and not in effecte, therefore be it established that thassemble for the celebrating or keping of this feaste from hensforth shalbe vppon the Whitson euen and Whitson sonday and Whitson monday, except for the cause of plage, or some other cause specyally mouing his Maiestie to put it of to some other day and tyme, which shalbe alwaies referred to the saide soueraignes pleasour. And if his hieghnes pleasour to the contrary be not therin certified to the knightes of thorder, they shalbe all bounden to assemble wher his Maiestie shalbe at Whitsontyde, as is aforesaide, And being so assembled shall geue their attendance in their mantell and Robes during the saide feaste, as they haue accustomably vsed to doo, except they or any of them shalbe licenced by the saide soueraigne to the contrary.

<sup>a</sup> This is written in the upper margin, subsequently to the other notes.

[The Queen's MS.]

collarem aut torquem exiguum appenderit, una cum insignibus ordinis Garterii, duo eiusdem ordinis socii sinistrum ipsorum crus loro fibulato circumdabunt, quibus <sup>etiam</sup> ~~simul~~ presentium statutorum libellus <sup>tradetur</sup> ~~traditur~~.

- [11] Eques creatus Wyndesoram se conferto, ad eumque a rege locumtenens siue uicarius duoque coadiutores mittuntur, qui (quod sine aliorum equitum preiudicio fieri possit) tali sede illum locabunt, que dignitati ipsius apta fuerit. Vestes etiam ordinis sui ueteri ritu assumet, nempe trabeam, tunicam talarem, et capitium humerale, iisque indutus, prescriptam sibi sedem capessens, publicas audiet preces et una cum Vicario Regio illiusque coadiutoribus cenam dominicam participabit.

*Electus miles in reg. eodem tempore*

- [12] A precibus <sup>causas</sup> iurabit se pro uirili propugnaturum ac defensurum dignitates quasuis, <sup>titulos</sup> iura ac ditiones Regis Angliæ, ordinis illius Principis, et quoad eius fieri potest sustentaturum studiosos uerbi Dei, gloriam insuper et honorem <sup>Dei</sup> ~~diuinum~~ promoturum, huiusceque ordinis statuta per omnia seruaturum.

- [13]† Ordo ille qui de armorum insignibus, uulgari Hatchmentorum nomine appellatis, constitutus olim fuit, nimirum de equitis uniuscuiusque uexillo, galea, crista ornamenti galee, quod mantellum uocant, et gladio, tenetor.

- [14, 15] Porro cum istius ordinis festum Georgio ademptum sit, ne uerbis uideamur modo non etiam re ipsa Georgii diem tollere atque abrogare, Lege cautum esto, ut ad hoc festum imposterum celebrandum conuentus equitum fiat vigilia dieque ipso Pentecostes ac die proxime sequente, nisi pestis contagione aut alia grauiori causa impedita Regia Maiestas hoc ipsum in aliud tempus differendum duxerit. Que res ipsius arbitratui in uniuersum relinquetur. Et nisi equitibus ordinis aliud fuerit ab ipso rege per litteras

significatum, <sup>necesse erit</sup> ~~tenebuntur~~ <sup>omnibus</sup> ibi omnes ad Pentecosten comparere, ubi rex id temporis commorabitur, ut ante <sup>attendant</sup> sancitum est. Ibique, trabeis ceterisque uestimentis ordinis induti, operam suam dabunt donec festum illud absolua-  
luatur (ut est ab iis antea factitatum), nisi ipsis aut ipsorum cuiquam Princeps diuersum permiserit.

† Ad hanc, intra unum mensem ab electione, miles electus sibi providebit trabeam, tunicam talarem, capitium humerale, et collarium. Soluet etiam cancellario, registro scribæ, et Garterio, armorum regulo, debitas consuetas mercedes et consuetudines ordinarias pensiones et feoda. Garterius etiam eriget insignia armorum, uulgo dicta Hatchmenta, in loco constituto, intra eundem mensem. Hoc facto perfectus et uir-  
omni ex parte expletus integer ordinis socius ~~cenar~~ et collega censebitur.

in ceteris

## [The Windsor MS.]

[16] And vpon the saide Whitsondaye or such other daye as shalbe appointed by the soueraigne to kepe the saide feast vpon, the saide knightes shall heare morning prayers, and those that canne prepare themselves shall receue the communyon, and at after none they shall allso heare the euening prayers.

[17] The knightes that be absent shalbe bounde to do the like in their howses all the same tyme, hauing on the <sup>hole</sup> robes of thorder.

[18] Moreouer the knightes present in their robes of thorder shall dyne and suppe, sitting all on a syde, in such ordre as they be stalled at Windesour. They shall goo allso the same dayes to chapter, if ther be ought to be done to agre vpon it.

<sup>shal</sup> [21] There <sup>shal</sup> be certaine sommes of money which ~~are used to~~ <sup>com in be elected</sup> be leuied whenne any knightes of thorder ~~do dye~~.

Of the kinge of Englande . . . . .	viiij li. vj s. viij d.
Of a foreyne king . . . . .	vj li. xiiij s. iiij d.
Of the Prince . . . . .	v li. xiiij s.* viij d.
Of a Duke . . . . .	v li.
Of a Marquesse . . . . .	iiij li. xv s.
Of an Erle . . . . .	l s.
Of a Vicounte . . . . .	xliij s. viij d.
Of a Baron . . . . .	xxxiiij s. iiij d.
Of a Bachelor knight . . . . .	xvj s. viij d.

Besides <sup>by the</sup> ~~whanne~~ <sup>at the time of their election</sup> knightes be elected, these sommes of money be to be paied.

By the king of Englande . . . . .	xl marc.
By a foreyn kinge . . . . .	xx li.
By the Prince . . . . .	xiiij li. vj s. viij d.
By a Duke . . . . .	x li.
By a Marques . . . . .	viiij li. vj s. viij d.
By an Erle . . . . .	vj li. xiiij s. iiij d.

\* An error for xvj.

[The Queen's MS.]

[16] Tum autem hoc ipso die Pentecostes, aut quo alio ab ipso Principe ad huius festi celebrationem designato, predicti equites matutinis precibus adsunto, et qui se preparare poterunt communicanto, insuper et pomeridiano tempore uestertinas preces audiunto.

[17] Hunc morem equites absentes obseruabunt etiam in priuatis edibus suis, per totum istud tempus, apparatus itidem ordini suo accommodatum gestantes.

[18] Preterea, qui presentes fuerint ordinis sui uestibus ornati, quum sint pransuri cenaturiue, ab altera mensæ parte accumbent omnes, loca capescentes, quemadmodum sunt Wyndesoræ sedibus dispositi.

Istoc die in Capitulum se conferent etiam si quid fuerit de quo sit consultandum.

[21] Pecuniæ quædam summæ pend<sup>ebuntur</sup> solent, quoties equitum aliquis <sup>electus</sup> uita defunctus fuerit, viz. :

Ab Angliæ Rege . . . . .	viiij li. vj s. viij d.
Ab Extero Rege . . . . .	vj li. xiiij s. iiij d.
A Principe . . . . .	v li. xvj s. viij d.
A Duce . . . . .	v li.
A Marchione . . . . .	iiij li. xv s.
A Comite . . . . .	l s.
A Vicecomite . . . . .	xlj s. viij d.
A Barone . . . . .	xxxiiij s. iiij d.
A Bacchalaureo <sup>equite</sup> $\wedge$ . . . . .	xvj s. viij d.

<sup>etiam huius ordinis</sup>  
<sup>ab his  $\wedge$  qui equites  $\wedge$  creantur</sup>

Preter has, ~~quum creantur equites~~, soluende sunt itidem pecuniæ portiones quædam.

Per Angliæ regem . . . . .	xl marc.
Per exterum Principem . . . . .	xx li.
Per Principem . . . . .	xiiij li. vj s. viij d.
Per Ducem . . . . .	x li.
Per Marchionem . . . . .	viiij li. vj s. viij d.
Per Comitem . . . . .	vj li. xiiij s. iiij d.



## [The Windsor MS.]

By a Vicount	.	.	.	.	v li. xvj s. viij d.
By a Baron	.	.	.	.	v li.
By a knight	.	.	.	.	iiij li. vj s. viij d.

Let these forsaid sommes of money be gathered and disbursed to the pore, as sometye it was accustomed.

[22] The king of Englande, soueraigne of thorder, shall yelde the money that foreine Princes shall owe by tharticle aforesaide.

[23] And forasmuche as it is conuenient to haue some speciall ministres belonging to this noble ordre, It is therfor enacted that ther shalbe foure officers of this ordre, a Chauncelour, a Register, an Husscher or Prouoste that shall bere the blacke rodde, and a king of armes who shalbe called Garter.

[24] The Seale of thordre shall haue ~~on thonsyde~~ tharmes of England and Fraunce together with tharmes of thorder, with this superscription rounde aboute it <sup>Λ</sup> ~~VERBVM DOMINI MANET IN ETERNVM, on thothersyde, thorder within a garter.~~

[25.] The Chauncelour with this seale shal seale all decrees, licences, orders, letters, and all other thinges which to the saide order doo belong or any waye ought to apperteigne.\*

[26] The Regester shall keape a recorde in Latin in a greate ligier, what day euery knight is chosen, what day he dyeth, what statutes be made, what ~~what nominations be made,~~ repealed, <sup>Λ</sup> and if there shalbe any thing els concerning the said order, and this booke he shall leaue in the castell of Windesour to his successour in that office.

[27] Garter, the king of Heroldes and Armes, shal take the names, sur names, Armes and cognizaunces of euery knight that is elected. The same boke he shall leaue to his successours, and if any doubte shall ryse vppon Armes, the Erle Marshall of Englande, callinge the saide Garter and suche others of thofficers of Armes as shalbe thought mete, shal discusse it.

*Hony soit qui  
mal y pense,  
and the signet  
shal haue y<sup>e</sup>  
same in les rome*

\* Also he shal  
weare a long  
blew damask  
gowne w<sup>th</sup> sleuis,  
at the time of  
the keping of  
the feast and in  
al chapters, and  
weare about his  
nekke th'armes  
of England and  
Fraunce ioined  
w<sup>th</sup> th'armes of  
th'ordre.

[The Queen's MS.]

Per Vicecomitem . . . . .	v li. xvj s. viij d.
Per Baronem . . . . .	v li.
Bachalaureum	
Per <sup>A</sup> equitem . . . . .	iiij li. vj s. viij d.

Colliguntur predictæ pecuniæ, et in pauperum vsus distrib[u]untur, quemadmodum aliquando fieri solebat.

[22] Pecuniam quam externi Principes ex superiori statuto debebunt Rex Angliæ, ordinis supremus, prestabit.

[23] Quoniam preterea consentaneum est ut certi quidam ministri excellentissimo huic ordini inseruiant, Statutum est ea gratia ut quatuor eidem <sup>assignentur</sup> deputentur, nempe Cancellarius, Scriba, Prepositus siue apparitor uirgam ferens denigratam, et primarius fecialis siue armorum regulus, qui Garterius uocabitur.

[24] Sigillum ordinis habebit ab altera parte Angliæ et Galliæ arma, vna cum ipsius ordinis dictis insignibus, circumscripta hac sententiola, VERBUM DOMINI . MANET . IN . <sup>fusum</sup> ETERNVM, ab altera uero ipsum insigne ordinis Garterii loro fibulato circumplexum.

[25] Isthoc sigillo Cancellarius omnia decreta, <sup>concessiones</sup> licentias, constitutiones, litteras, et alia quecunque ad predictum ordinem pertinentia aut quoquomodo spectantia consignabit. Cancellarius

[26] Scriba notabit maiusculo codice, ad huiusce ordinis acta excipienda composito, quo quisque die eques ordinis factus sit, quo uita excedat, que statuta <sup>ab</sup> corroborata, queque derogata sint, et si quid preterea ascribendum fuerit, quod ad hunc ordinem spectet. Atque hunc quidem librum relinquet in castro Wyndesore ei qui sibi in officio successurus sit. toga manicata cene este talari ex ceraleo damaseo composita per orane tempus festi et in omni conuentu huius ordinis, gestabitque insigne armorum Angliæ et Franciæ coniuictorum cum insignibus ordinis a collo per fibulam dependens.\*

[27] Garterius, fecialis primarius, siue armorum Regulus, nomina, cognomina, arma atque insignia vniuscuiusque equitis cooptati excipiet, libellumque in quo hæc conscripta sint successori suo tradendum curabit. Quod si quid controuersiæ circa arma oriatur, Comes Marescallus Angliæ, Garterio et

\* This sentence is written, incompletely, in the upper margin.

Morouer the preuost and the register shal weare a like gowne as the chauncelour, and shal weare about their nekkes at a lace the red rose and the whit ioyned together. Also at al times when the knightes of th'ordre go together, next befor ~~the~~ the soueraigne shal go the preuost and garter and before them the chauncelour and register together. Also when the knights sit in their ~~own~~ stalles, the chauncelour and register shal sit on one forme set ouerthwart between the stalles, ~~But~~ and the preuost and Garter on the tother.

[The Windsor MS.]

- [28] Thussher and Prouost of thorder shall goo byfore the soueraigne of thorder, and in his absence bfore his lieutenaunt, bearing a blacke rodde, and shall kepe the dore, and shall haue the same auctorite which heretofore he hath vsed, That if any of the knightes shall offende contemptuously and heynously, and be of the same cryme conuicted in the chapter bfore the soueraigne, the hussher or Prouost of thorder, with the king of armes, or one of them, being auctorised and commaunded by the saide soueraigne, shall pull of his coller and garter, which shalbe reputed and taken, to all ententes and purposes, a full disgrating [and]<sup>a</sup> depriuatioun to the saide knight or knightes that shall be so disgrated.
- [29] Furthermore, when any foraine Prince is taken or chosen into this nombre of knightes he shall not be bounde to the ceremonyes of this order, nor shall not be bounde by this acte or statute to leaue the wearing of the George which they first receyued duringe their lyues, but as it it shall please hym.
- [30] After suche election of any foraine Prince, the soueraigne of thorder shall sende one knight of the same order a[nd G]arter, the kinge of Armes, who, after [the co]mmune praiours vsed in that contrey, [shall] put on those roobes on hym that be vsed to be worne, viz. the mantell, the kirtell, and the hudde. Abowte his necke allso t[hey sha]ll put a coller off Roses, ~~kn[ight armed] on horsbake~~ with ~~th[order]~~ as is af]oresaide pendaunt, and tye the gar[ter abowte] his legge.
- [31] ~~After this he shalbe stalled by the procurator, taking no maner of othe nor hearing any oth[er prayour] thence thaccustomed ther.~~
- [32] That the soueraigne of thordre maye dispence and gyue licence to omit any ceremonyes, if the cause requireth.
- [33] That these articles shalbe leyde vpp in the Colleage of Windesour as monumentes, statutes, and lawes of thorder, and all other contrary to these shalbe foreuer repealed. But all statutes heretofore made being not contrary to theis shal remaine in their former force and strenght.

<sup>a</sup> This word and other words and letters within brackets have been eaten away by mice.

<sup>b</sup> The king forgetfully reverts to the first person.

[*The Queen's MS.*]

aliis armorum ministris qui ad eam rem accomod<sup>at</sup>i uidebuntur conuocatis, hanc dirimet.

- [28] Prepositus siue Apparitor ordinis principem precedet, et eo absente vicarium eius, virgulam gestans nigellam, fores hic etiam obseruabit, et qua antehac usus est autoritate eandem exercebit. Si enim equitum quispiam obstinate nefandum aliquod facinus perpetrauerit et de eo conuictus fuerit in capitulo coram principe, apparitori licebit, adiuncto sibi armorum rege, aut eorum alteri, accepta a Principe autoritate, torquem illi et ordinis fibulatam fasciam detrahere. Quod quidem illi erit per omnia ordinis certissima depriuation, necnon hiis omnibus qui ornamentis ad eum modum fuerint spoliati.
- [29] Ad hec, cum princeps externus aliquis in hunc ordinem ascitus fuerit, ceremoniis eiusdem non constringetur, nec presentium statutorum vi cogetur, dum uixerit, Georgii imaginem exuere quam prius acceperit, istuc enim illi liberum esto.
- [30] Post electum istiusmodi Principem externum, ordinis Princeps equitem aliquem ex suis et Garterium, armorum regem, ad eum legabit, qui, peractis eius regionis communibus precibus, honorariis eiusmodi uestibus illum coornabunt, quæ ex more adhiberi solent, nempe trabea siue pallio, tunica talari, humeralique caputio. Ceruicem etiam ipsius cathena rosis intertexta circumcingent, eidem (ut predicitur) garterii ordine appenso, crurique inducto loro fibulato.
- [31] ~~Post hec sedem per procuratorem capiet, nullo iuramento astrictus, nullas audiens alias preces quam quæ apud suos habentur.~~
- [32] Ordinis Principi licet dispensare ac concedere (si res postulet) quascunque ceremonias omittendi potestatem.
- [33] Presentes articuli in Collegio Wyndosoriensi pro monumentis, statutis, ac ordinis istius legibus reconduntur, et quæ cum hiis pugnent abolentur. Statuta uero quæcunque antehac sancita, istis non repugnantia, pristinam uim, robur, ac momentum obtinento.

Reading the young king's schemes and notes for the revision of the statutes of an ancient order of knighthood, one cannot refrain from reflections on the wide difference between our modern ideas of education and the relaxations of youth and those of our forefathers of the sixteenth century. What lad of fourteen, in our own day, even though he were a young monarch with a sage appreciation of his responsible position, should we expect to give time and trouble to such an abstruse subject? Is it not with a feeling almost akin to pity that we regard the young Edward's painful tinkering of these ordinances, and conclude how much better it would have been for himself and, perhaps we may add, for his country, if he had given the hours thus spent to something better suited to his youthful years?

But turning from the young king to the companion of his literary labours, how interesting it is to find in these MSS. one more instance of that infinite capacity for taking pains which distinguished the indefatigable Cecil's career through a long life. Did ever man more carefully analyse and more carefully annotate every scheme, every paper that came before him? His well-known handwriting meets us at every turn. We feel no surprise however trivial the subject on which he remarks. Nothing was too unimportant for him. However great, however small the matter, he gave his full mind to it; and that he gave his full mind to such a serious matter as the revision of the statutes of the greatest order of knighthood of the kingdom no one can doubt.

XII.—*Excavations on the site of the Roman city at Silchester, Hants, in 1893.* By  
GEORGE E. FOX, Esq., F.S.A., and W. H. ST. JOHN HOPE, Esq., M.A.

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Read April 12 and April 19, 1894.

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THE following report forms a record of the excavations on the site of the Roman city at Silchester during the past year (1893), and includes an account of various explorations made in the previous year, which, for certain reasons, have not yet been described.

The work began last May, and was carried on until the month of October, but under considerable disadvantages from the great heat of the summer and want of rain, which hardened the soil to a degree that much interfered with the detection of foundations and rubbish pits. In spite of this hindrance a considerable acreage was examined.

A reference to the plan of the city will show a large *insula*, bearing the number VII., lying due south of that<sup>a</sup> which contains the *basilica* and *forum*. The examination of this was begun in 1892, and has now been completed. South of it, again, is another *insula*, which extends as far as the city wall. A large building in this, to which are attached the baths, had already been examined by Mr. Joyce, but the remainder of the area has now been worked out, and a number of additional buildings brought to light. The upper half of another *insula*, which we have numbered IX., lying on the north side of the modern road crossing the site, has also been excavated, but, as the examination of the rest of this block forms part of the programme for this year's work, it is proposed to defer the description of it until the account is given of the entire *insula*. Some minor researches in the eastern part of the city complete the record of the season's work.

<sup>a</sup> *Insula* IV.



THE BUILDINGS IN *INSULA* VII. AND *INSULA* VIII. By GEORGE E. FOX, F.S.A.

Turning to a more particular examination of last year's excavations, it will be well to commence with *Insula* VII.

This forms a square of the same size as *Insula* I., about 385 feet by 370 feet, and lies, as before mentioned, immediately to the south of the *forum insula*, from which it is divided by a street. Its eastern boundary is the street which passes the chief entrance to the *forum*; its western, the great main road from the north to the south gate. On the south is another street separating it from *Insula* VIII. This extensive area is divided into two unequal parts by a lane  $11\frac{1}{2}$  feet wide, running east and west between blank walls. The lane does not appear to have had any outlet on the west, but to have ended in that direction in a kind of square to the south of one of the houses occupying the north-west corner of the *insula*. The northern and smaller portion of the *insula*, cut off by the lane, is about 130 feet wide. Its western half is filled by the remains of three houses. The eastern half is empty ground scattered over with numerous rubbish pits and divided into three parts by two thin walls running north and south. The ground between these walls seems to have been gardens and not to have been built upon; if it was, all traces of constructions are now lost.

The lower portion of the *insula*, south of the lane, also shows nothing in its eastern half but empty ground with a few rubbish pits. Curiously enough the south wall of the lane runs over three of these. At the west end of this wall and running southwards from the square previously mentioned are fragments of walls and a portion of a red-tile tessellated pavement, the only traces now left of what may have been a house of some size occupying the centre of the west side of the *insula*. South of these and abutting on the street is another house of small dimensions, to the east of which is the principal object of interest here, the foundation of a large polygonal building, excavated by Mr. Joyce and by him named a temple. There are some remains of constructions south of the temple lining the street there.

It will be observed that the type of the houses in this *insula*, with the exception perhaps of No. 1, varies from that most common in the other portions of the city known to us. Three out of the four discovered were not built round courtyards, but each consisted of a long row of chambers lined by a corridor on one or both sides, with other chambers irregularly attached. Again, the houses did not border the roadways but stood with their gables to them, and the axes of three of them are not exactly perpendicular to the direction of the roadways.

The houses which fill irregularly the north-west angle of the *insula*, or rather

its north-west quarter, appear to have been of different dates, and much alteration and confusion of plan are here visible. The remains of house No. 1, apparently the oldest and possibly the largest, are very fragmentary. The principal chambers lay along the street to the north, and had a wide corridor of communication bordering them on the south. Possibly the existence of a western wing may be inferred from the remains of a corridor on that side. About 15 feet west of this are traces of another line of wall, to the south of which is a red-tile pavement partly covered by another and later house. These remains may indicate that this wing consisted of the usual row of chambers lying between two corridors. Vague fragments of rubble near a westward return of the tile pavement just mentioned also point to the existence of a group of chambers at the end of the wing, one of which was perhaps heated by a hypocaust. All these traces, however, are so indistinct that no positive opinion can be expressed regarding them. Even supposing the existence of a western wing, the house does not appear to have reached quite up to the western boundary of the *insula* but a space of ground was left between it and the main street. Of this arrangement we shall find another example. One other feature in this house requires notice. It will be seen that at the east end the corridor appears to have been returned northward, leaving beyond it a large chamber extending the whole breadth of the house. At the opposite end a different disposition occurs. The western corridor is there returned along the street, and has on the south an open court 32 feet long and 19 feet wide. Traversing this return, though not quite in the centre, is a small rectangular chamber 12 feet by 9 feet, with an apse on the south side projecting into the court. From the position of this singular chamber with its apse to the south, it may be inferred that it opened, perhaps to its full width, upon the street, in which case we might, with some show of reason, believe that the little edifice was a wayside shrine to the *lares compitales*. Such an inference would be justified by its likeness to similar structures which occur in the streets of Pompeii. At any rate some divinities having the attributes of these deities may have been here honoured. If, on the other hand, the chamber was closed to the street and entered only from the corridor (not a likely arrangement), it might then be considered the *sacrarium* of what was a large and important house. The western corridor was paved with the usual tile tessellation, which also occurs in patches in the spaces on either side of the apsidal chamber. Near the south end of this corridor was a pit, which, on being opened, produced amongst shards of ordinary pottery a tiny fragment of a very rare yellow glazed ware, with red streaks in the glazing to imitate marble.

From the same house came also part of a small capital, a drawing of which is given in Plate XIX. fig. 1.

House No. 1 must have been destroyed before the building of House No. 2, for the end of the later house completely traverses the centre of it. At first sight the plan of House No. 2 appears a mere tangle of lines crossing each other in various directions. A little patience, however, will clear up the difficulty and reveal the fact that the second house has been enlarged and otherwise altered. Upon the plan the lines of the first building are distinguished from those of the second by being left unshaded. The house extended right across the section of the *insula* in which it stood, from the street on the north to the west end of the lane before mentioned. The main lines of its walls did not form a right angle with these roadways, but had a slight inclination towards the north-west. The plan of the house, both before and after its enlargement, is made up of a long row of chambers of varying width lying between two corridors extending its entire length. In the first state of the house the width of the corridors was  $8\frac{1}{2}$  feet, and the uniform length of the chambers 17 feet 9 inches. At the north end of the western corridor are some scanty fragments of its mosaic pavement, consisting of a ground of drab sandstone *tesseræ*,<sup>a</sup> with a bold geometric pattern formed by lines of others of red tile.

The house apparently was entered by doorways at the ends of the corridors. There was certainly an entrance from the lane in the eastern one. Attached to the corridor near this door was a chamber (1) 8 feet long and  $8\frac{1}{2}$  wide, with another (2) adjoining it on the east of the same width but 7 feet long. On the east side of the latter is the opening of a furnace, and in the south wall another opening apparently communicating with a larger chamber now destroyed with the exception of a part of its cement floor. These are indications of the winter rooms warmed by a hypocaust.

It will be noticed that the south wall of the house and most of the north wall of the lane have a greater thickness than any of the other walls. This may imply that there were buildings of some kind bordering the lane. If so they have disappeared and left no trace.

The later form of the house shown by the black and gray lines on the plan (Plate XVI.) was for the most part only an enlargement of the older as regards its width. The western wall of the range of chambers was moved about 4 feet further west, but not exactly parallel with the old wall, the space between the two being 3 feet at the south end while it is only 1 foot at the north. A new

<sup>a</sup> Like those used in the corridor of House No. 2, *Insula I.*

western corridor was also built of the same width as the old one. On the other side the wall of the chambers was moved between 2 and 3 feet further back, together with the corridor, but this increase did not extend the whole length of the house, being stopped at about 52 feet from the lane. At this point was a door giving access to the newer part of the house, and from it to the lane and on this side only the older arrangement was preserved.

At the northern end of the building it is scarcely possible to make out the disposition of the chambers either in the older or newer state of the house. The first perfect room (3) shows a breadth of 17 feet by  $23\frac{1}{2}$  feet, and its floor is covered by the usual red-tile *tesserae*. The next room (4) with the same length ( $23\frac{1}{2}$  feet) is only 12 feet wide. A pit was found against its northern wall and the floor was also of tile *tesserae*. It may possibly have been the kitchen of the earlier if not of the later house. Room 5 measured  $16\frac{3}{4}$  feet by  $23\frac{1}{2}$  feet. It had in its flooring, set in a ground of red-tile *tesserae*, a large panel of better mosaic, of which only a fragment remained. The panel was 11 feet square, and the width of the red ground in which it was inserted was  $4\frac{1}{2}$  feet on the east side, 4 feet on the west, and 3 feet north and south respectively. Against the west wall of the room a strip 4 feet wide was unpaved. Perhaps this curious arrangement of the central panel may indicate that this chamber was the *triclinium* of the re-modelled house. Exactly opposite to it, on the other side of the eastern corridor, and close to the inner door between the old and new divisions of the house, was a room (6) 13 feet square with a hypocaust heated by a furnace in the south wall. This wall is prolonged eastward 7 feet and ends with a curious mass of masonry of irregular form trending southwards.

The first section (7) of the older division of the house is clearly a passage, 21 feet long and 4 feet wide, from one corridor to the other. The next section (8) is of the same length, but only 3 feet wide, and there can be little doubt was destined for a staircase to an upper floor. The large room (9) adjoining it was 16 feet wide and 21 feet long and had the usual tile mosaic flooring with a small panel of better tessellation inserted in it, but of this nothing remained. If this floor is a relic of the older house, this panel would have been as nearly as possible in the centre, but the alteration of the western wall of the chambers has left a wider space on that side.

The remaining divisions (10, 11, and 12) present nothing worthy of remark, except perhaps that the end room is not rectangular owing to the angle which the building makes with the street.

Before leaving this house it may be mentioned that it has a total length on

its axial line of about 130 feet, and a breadth, taken on the centre of chamber 4, of 46 feet. The long walls of the range of chambers have an average thickness of 2 feet 3 inches, whilst those of the corridors and internal divisions average 1 foot 10 inches. The wall of the south end of the house, and its prolongation along the lane, measures 3 feet  $4\frac{1}{2}$  inches in width, which is exceptional.

House No. 3 next claims attention. This was excavated by the Rev. H. G. Munro and the Rev. T. Langshaw, and has been carefully described by our Fellow Mr. F. G. Hilton Price, in *Archaeologia*.<sup>a</sup> It has not therefore been thought necessary to re-examine its foundations, which had been again covered up, except to ascertain its exact position in relation to the other buildings of the *insula*.

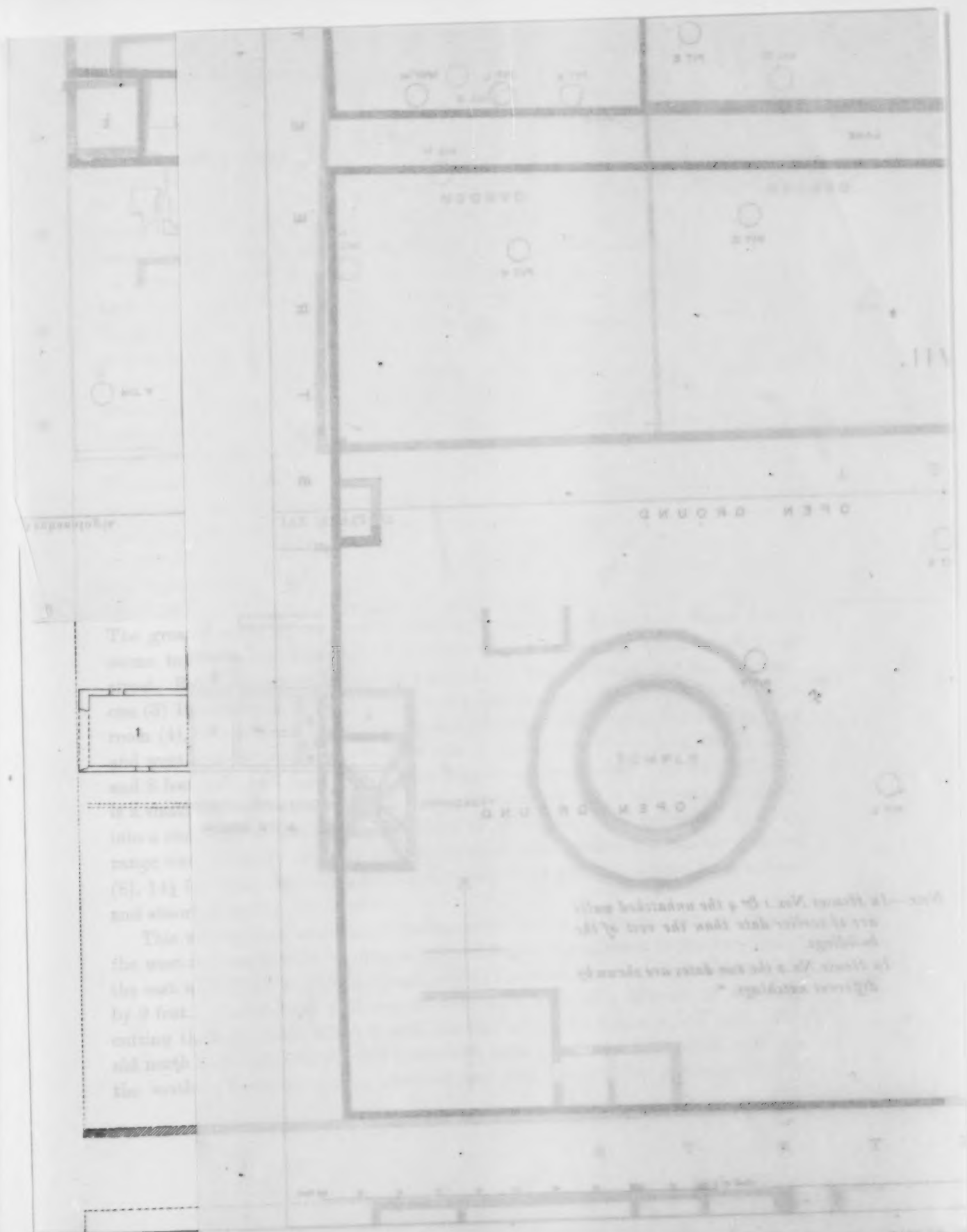
This house presented its gable to the street on which it stood (the principal roadway north and south through the city), from which it extended inwards nearly as far as House No. 2. It consisted of a row of seven chambers, lined by a corridor on the south side. The easternmost chamber is longer than the others, and takes in the whole breadth of the body of the house. At the west end there is a return of the corridor southwards for 11 feet, communicating with a detached chamber lying upon the street. The *façade* of the house upon the roadway must therefore have presented what appears to have been an open vestibule 20 feet 2 inches wide, lying between two chambers, with a passage to the house door, which was situated 20 feet up the corridor. The chambers north and south of the vestibule may have been shops, with counters of masonry along the line of the street.<sup>b</sup>

The considerable mass of red-tile tessellated flooring underlying this house (see plan, Plate XVI.) indicates the existence of a corridor, which, as has already been noted, may have belonged to House No. 1. The pavement traverses the corridor of House No. 3, and extends into chamber 4, where the composition of the flooring indicates that it continued still further north. It is clear from this that House No. 3 has been planted across the ruins of an earlier one. Moreover, its proportions and the thickness of its walls prove that it does not belong to the

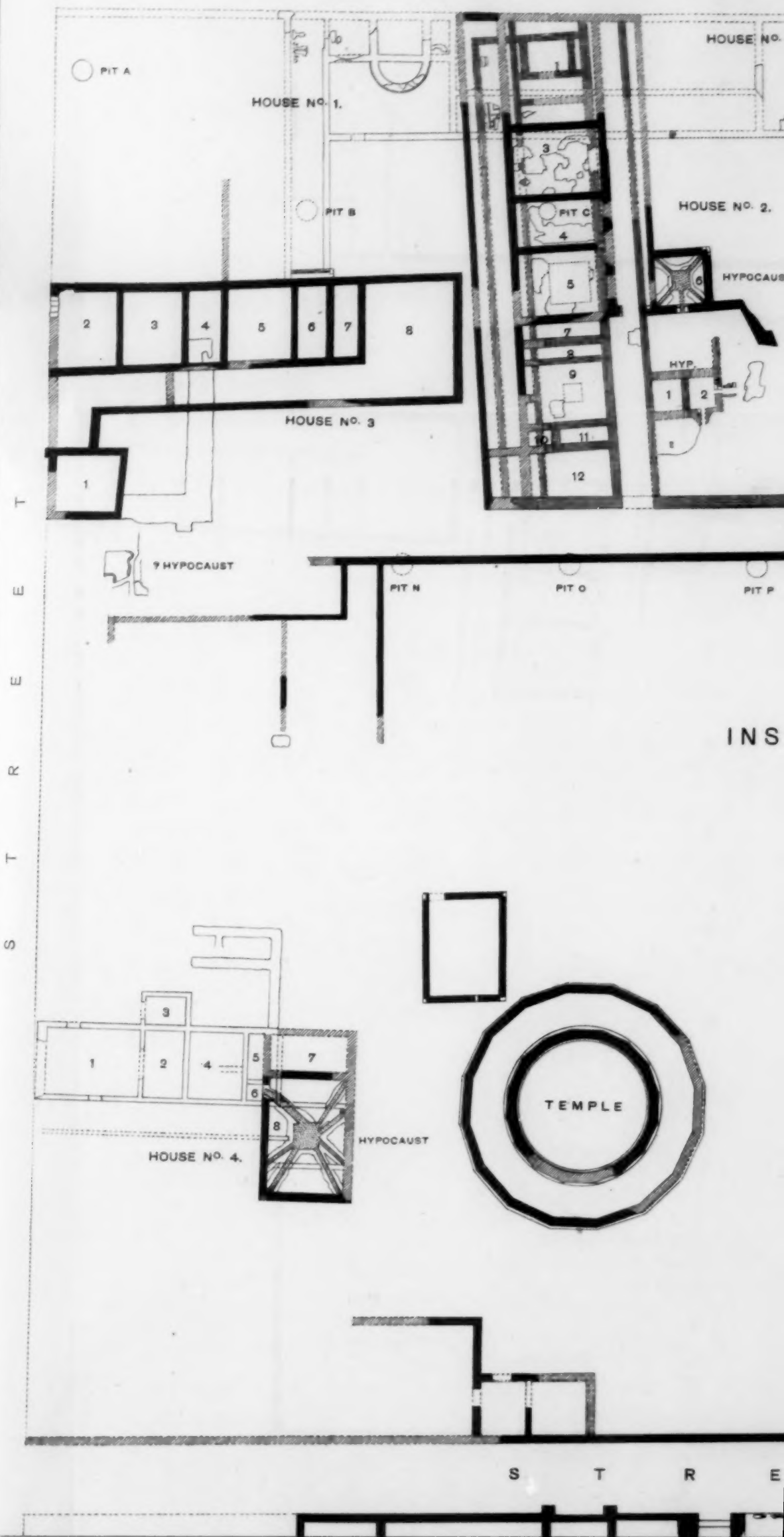
<sup>a</sup> Vol. L., pp. 268-271.

<sup>b</sup> The dimensions of the chambers are as follows: 1, 15 feet 1 inch by 17 feet 3 inches; 2, 20 feet 6 inches by 15 feet 8 inches; 3, 19 feet 6 inches by 15 feet 6 inches; 4, the same by 9 feet; 5, the same by 17 feet 8 inches; 6, the same by 7 feet 9 inches; 7, the same by 6 feet 6 inches; 8, 31 feet 1 inch by 24 feet 1 inch. The width of the corridor was 9 feet 2 inches, and the thickness of its outer wall 1 foot 9 inches. The main walls of the house had an average thickness of 2 feet, though the partition walls of the chambers were less.









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*at Silchester, Hants, in 1893.*

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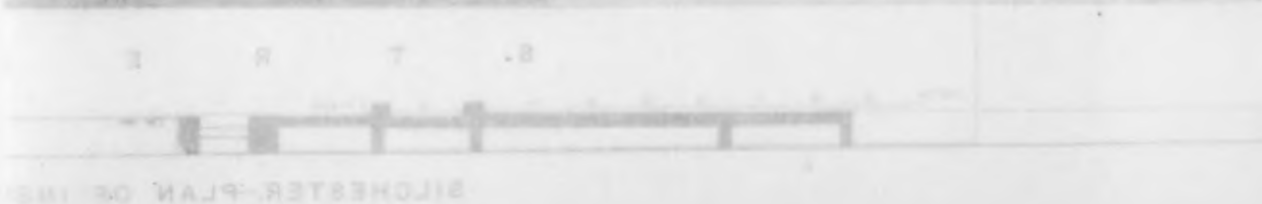
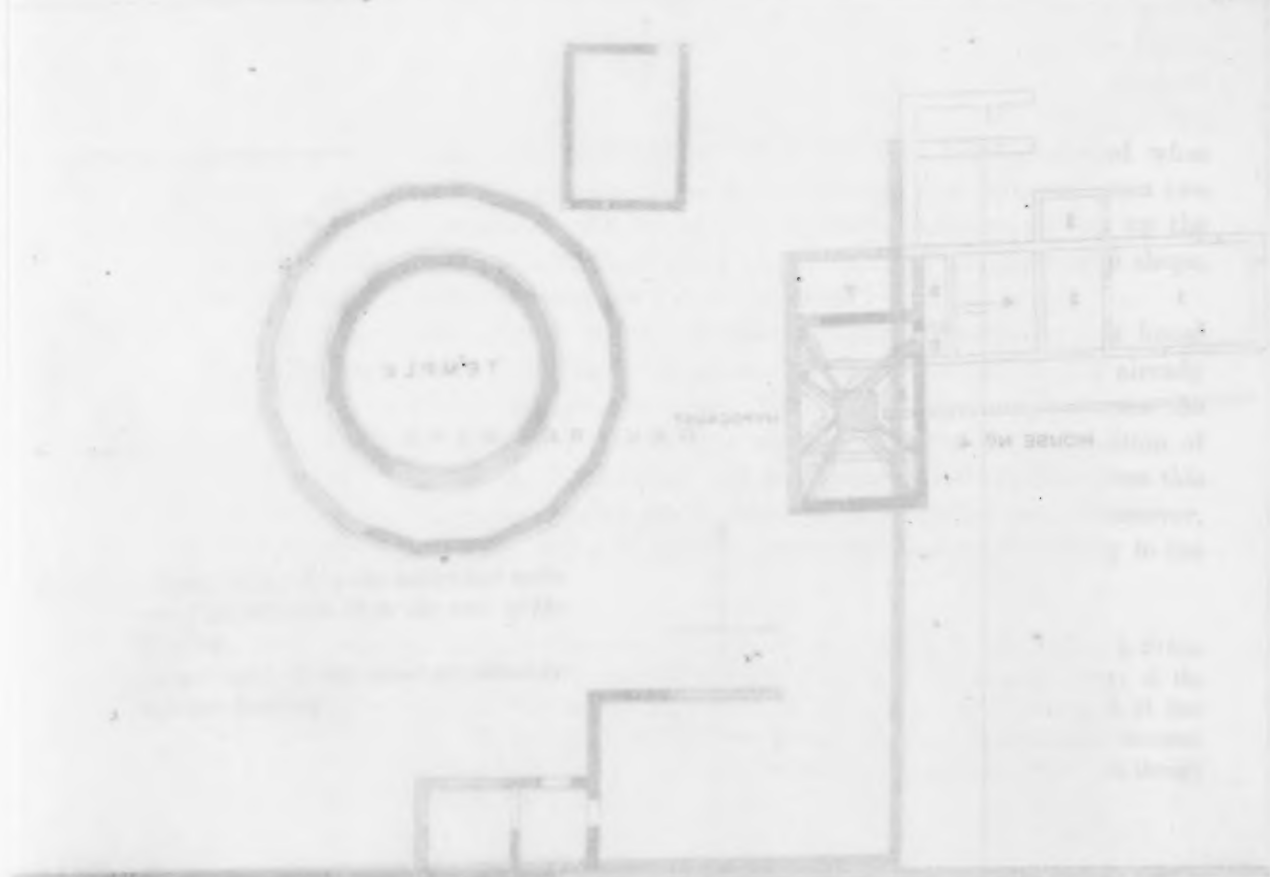
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SILCHESTER-PLAN OF INS.

earlier buildings of the city. One other fact must be mentioned with respect to this house. Like the one previously described, it did not lie with its axis perpendicular to the line of the roadway on which it was situated, but was canted some feet to the north at its eastern end.

House No. 4 resembled No. 3, in that it presented its gable to the main way between the north and south gates, and that the axial line of its chambers was not at right angles to the street. In this instance it was deflected slightly southwards. It was also like No. 3 in consisting of a row of chambers with a corridor of communication on the south side. It however possessed what the other did not, a winter chamber at the eastern extremity of its corridor, warmed by the usual composite hypocaust. The house is a small one; its length, including the winter room, being 86 feet, its breadth  $20\frac{1}{2}$  feet, and the width of the corridor 8 feet. The average thickness of the walls is 1 foot  $4\frac{1}{2}$  inches. It consisted of seven divisions originally, for like most of the buildings at Calleva it had suffered change. The thin walls and comparatively small compartments probably indicate an early structure.

Beginning from the west end, the first chamber (1) measures 25 feet  $1\frac{1}{2}$  inch by 17 feet  $4\frac{1}{2}$  inches. There was nothing to show that it had been subdivided. The greater width of the western wall, as in chambers 1 and 2 of House No. 3, seems to imply the existence of a shop, with a masonry counter facing the street. Room 2 measures 10 feet  $7\frac{1}{2}$  inches by 17 feet  $4\frac{1}{2}$  inches, and has a smaller one (3) 10 feet  $7\frac{1}{2}$  inches by 7 feet 6 inches attached to it on the north. The next room (4), 16 feet by 17 feet  $4\frac{1}{2}$  inches, was perhaps divided by a wall running east and west into two unequal parts, but this is uncertain. Room 5 is 12 feet long and 8 feet wide, and retains part of its floor of red-tile *tesseræ*. At its south end is a small oblong chamber (6), measuring 8 feet by  $4\frac{1}{2}$  feet, which has been turned into a stokehole for the later winter room of the house. The end room (7) of the range was 18 feet square, and had on its south side another and smaller chamber (8),  $14\frac{1}{2}$  feet long, entered from the corridor, but both rooms have been altered and absorbed by the winter room.

This winter room added considerably to the size of the house. To construct it the west and south walls of chambers 7 and 8 were taken down to the floor level; the east wall of the house was rebuilt, and at the same time lengthened southward by 9 feet. A new west wall was built parallel to it at a distance of  $20\frac{1}{2}$  feet, cutting through rooms 5 and 6, and the two joined by a new south wall. The old north wall was retained, and a new wall built parallel to it 9 feet 6 inches to the south. There were thus obtained two new rooms; the northern 20 feet

6 inches long and 9 feet 6 inches wide, the southern 30 feet long and 20 feet 6 inches wide. In the southern chamber was constructed a hypocaust of the usual type, with a central chamber, 6 feet  $4\frac{1}{2}$  inches square, for the *pilæ*.<sup>a</sup> From this radiated six channels to as many flues placed in or near the angles of the outer walls. The stokehole was formed in the portion of chamber 6 not encroached upon by the new west wall. The walls of the newer work were thicker than the old, showing an average width of 2 feet. Traces of the older walls could be detected between the channels of the hypocaust, which passed through them.

It seems probable that the new northern room formed an antechamber to the southern room, or hall, as it may be called, and that it was separated from it by columns, the north wall of the hall being only a sleeper wall to support them. Such an inference may be drawn from the existence of heavy blocks of ironstone incorporated in the wall at about the floor level, which may have formed the supports of the columns. Foundations to the north of this ample hall and its antechamber give colour to the belief that it must have been part of an important edifice lying between Houses Nos. 3 and 4, and was not merely an annex to the insignificant building of which it now seems the principal portion. The smaller and earlier structure may have been incorporated in the later and larger one, which has now so completely perished. The earlier has survived the later work.

Some 19 feet north-east of House No. 4 are the rubble walls with brick quoins of a detached rectangular building,  $25\frac{1}{2}$  feet by  $18\frac{1}{2}$  feet, with walls 1 foot 10 inches thick. It had a doorway in the north wall close to the north-west corner and its south-east angle approached within 3 feet of one of the sides of the polygonal building presently to be described. Other instances of detached structures, it may be remembered, have occurred at Silchester, as for instance those associated with House No. 1, *Insula* I., and House No. 2, *Insula* II.

We now come to the last and most important building of the *insula*, that which has so long been named "the Temple," and which, perhaps, we may with truth still continue to call so.

The foundations were excavated by Mr. Joyce about the same time as those of the *basilica*, but he has left no published account of his discovery. No architectural details appear to have come from the spot, nor did we find any in our re-examination. A fragment of a base belonging to a column of some size (Plate XIX. fig. 2) was found not very far off in *Insula* VIII., which may have

<sup>a</sup> These had all been removed.



formed part of the structure; but this is conjectural. On the spot only foundations remain.

These consist of two concentric rings or footings of a slaty stone, the outer 3 feet, the inner 4 feet wide. On these were built walls, the outer 2 feet 5 inches thick, forming a 16-sided polygon, the inner 2 feet 6 inches thick, equally showing 16 faces corresponding with the external ones but being circular within. The footing of this latter wall is circular both within and without, while that of the exterior ring coincides roughly with its sixteen sides, and though projecting externally is flush with the wall face within. All the angles of the two rings are strengthened inside and out by blocks of ironstone. The flint rubble masonry of which the walls are composed has also bonds of the same material. Tile courses are conspicuous by their absence. In places along the south-west quadrant and partly on the east there are traces of a bed of pink cement lying just below the footings of the external ring of masonry, possibly a bed on which gutters had been laid. At no point do the walls stand more than 1 foot 7 inches above the footings. The diameter of the internal ring of masonry is 35 feet 7 inches. The width between the two rings is 9 feet 6 inches. The length of each side of the polygon measured, on the external faces of the outer ring, 12 feet 8 inches; on the inner ring, 8 feet. The total diameter of the temple is about 65 feet.<sup>a</sup>

<sup>a</sup> These measurements may be compared with those of the well-known circular temple at Tivoli, the *cella* of which has an internal diameter of 23 feet 11 inches with a width of 5 feet 8 inches for its peristyle. The internal diameter of the *cella* of the equally well known circular temple in the Forum Boarium at Rome is 28 feet, the width of the peristyle being 7 feet 5 inches (Taylor and Cressy, *Architectural Antiquities of Rome*, 1874). This latter edifice there is reason to believe was dedicated to Hercules (See Professor Middleton's *Ancient Rome*, p. 378, 1st Edit.), and it would be a curious coincidence if the one at Silchester had the same dedication. Round temples occur in Gaul, notably one at Périgueux (M. de Tallefer, *Antiquités de Vesone*, tom. i. p. 328 *et seq.*), and other examples will be found at Jublains (Mayenne) (De Caumont, *Rudiment d'Archéologie ère Gallo-Romaine*, p. 237), one south of Jublains (*Bulletin Monumental*, 9, 1843, pp. 633-4), and in the forest of Beaumont-le-Roger in Normandy (*Mémoires de la Société des Antiquaires de la Normandie*, 1831, p. 168 *et seq.*), and others elsewhere. Circular buildings of the Roman period are rare in Britain, and the examples found come under the head of tombs rather than temples. A circular tomb occurs in a Romano-British cemetery at Lockham Farm near Maidstone (*Archæologia Cantiana* (1883), xv. 81). At Keston in Kent are the foundations of a circular building having an internal diameter of 23 feet 6 inches. As it stands in a cemetery in which sarcophagi have been found, and its doorway is of very small proportions, it was probably a tomb-house built to contain such sarcophagi and also sepulchral vases (see *Archæologia*, xxii. 336 *et seq.*). There is also a record in Cartwright's *Rape of Arundel*, 257, of the foundations of a circular building of considerable dimensions on a farm between Wiggshall and Pulborough, Sussex, but the Roman character of these remains has not been definitely ascertained.



No traces of flooring remain, but one fragment of mosaic composed of half-inch cubes of hard chalk, labelled by Mr. Joyce as from this site, and now preserved in the collection at Reading, shows that the pavements were at least in part of this material. The cubes of the mosaic are well cut and more finely joined than is usual on this site, and are set in a strong bed of the pink cement.

Looking upon the internal ring of masonry, as representing the wall of the *cella*, it is clear that such a wall could never have supported a dome, but only a low conical wooden roof. The columns, too, of the peristyle could have had no great elevation if we are to judge by the thinness of the supporting wall, perhaps about as much as those of the peristyle of the *forum*.

Again, if one column only was placed at each external angle of the building, the bearing for constructions of stone would have been too great, and only wood could have been employed for the entablature. By doubling the number of columns, by adding one in the centre of each side, a stone superstructure would have been rendered possible. The reason for the selection of a polygonal instead of a circular form for the peristyle of the temple arose evidently from the unwillingness of the builders to face the difficulties of execution proceeding from the curvature of the entablature above the columns, as also in the mouldings of the *podium*, had a circular form been adopted. By using a polygon of straight sides all such difficulties were at once avoided. It is probable that the temple stood upon a low *podium* or base, as the square temples found near the east gate in 1890 most certainly did. Such an elevation would most decidedly have been required to give dignity to an edifice which could not have had any great altitude.

The remains of this building lie in the south-west quarter of the *insula*, but not in the centre of that quarter. From the boundary on the west to the western side of the polygon the distance is 114 feet, from the street on the south to its southern side only 57 feet. On the west, House No. 4 nearly fills the interval between the temple and the great main road, while a detached structure, as before mentioned, almost abuts upon it to the north-west. East and north the whole remaining area up to the lane traversing the *insula* is open ground.

It might have been expected that a temple as important as this appears to have been would have had its sacred enclosure, and that some traces of such an enclosure would have been discovered. But nothing of the kind was revealed by the excavations. Possibly the lines formed by the lane on the north, and the streets east, west, and south may originally have been those of the sacred precinct, but the intrusion on the west side of the *insula* of House No. 4, which has the appearance of being an early one, seems to militate against this idea.

Still, this house may have had to do with the *personnel* of the temple, and the rectangular enclosure in such close proximity to it with its rites.

To what god was the edifice dedicated? There is nothing to help us to solve the question. The building stands in an important position, with ample space about it, and its great ring of thirty-two columns must have had an imposing effect. We know, from the well-known inscription found at Silchester in 1745,<sup>a</sup> that there was a local deity identified with Hercules, who was worshipped here. Perhaps we may venture on a conjecture that his temple has been found, and that here was the shrine of the Sægontian god.

Another word before passing to other subjects. Professor Freeman, in a paper on Silchester in his essays on *English Towns and Districts*,<sup>b</sup> speaking of the building in question, remarks on the possibility of its having been built for a Christian church, and says that if such had been the case its columns would have been placed within instead of without. The construction, however, of the inner ring of masonry, which would, under this supposition, have carried those columns, tells against this theory. Merely as a sleeper wall it would not have been necessary to make it polygonal on its exterior side, with faces carefully adjusted to the corresponding faces of the outer ring: it would have been more convenient to have made both sides circular, and by so doing have given a better footing for the columns. It does not at all follow that the building was not converted into a church in Christian times (this may possibly have happened), the wide area to the east being retained for the uses of that church, as they had served in earlier years for the uses of the temple.

It may be noted that from a trench at no great distance from the temple came a fragment of an *alabastron* of so-called Oriental alabaster, perhaps the relic of a gift to the shrine.

The boundaries of *Insula VII.* on the west side are to be made out now only by the end walls of Houses 3 and 4, but from the south-west angle they are clearly defined along the south side, by fallen masses of rubble for a distance of 127 feet, and from thence to the opposite angle by solid foundations 2 feet thick. Where these foundations commence on the west are the remains of two chambers, the eastern 15 feet by 14 feet, the western 12 feet by 14 feet. The latter has three openings, one in each of its east, west, and north walls, and its west wall is continued northwards till it returns at a right angle 29 feet from the street,

<sup>a</sup> *Corpus Inscriptionum Latinarum*, vii. No. 6.

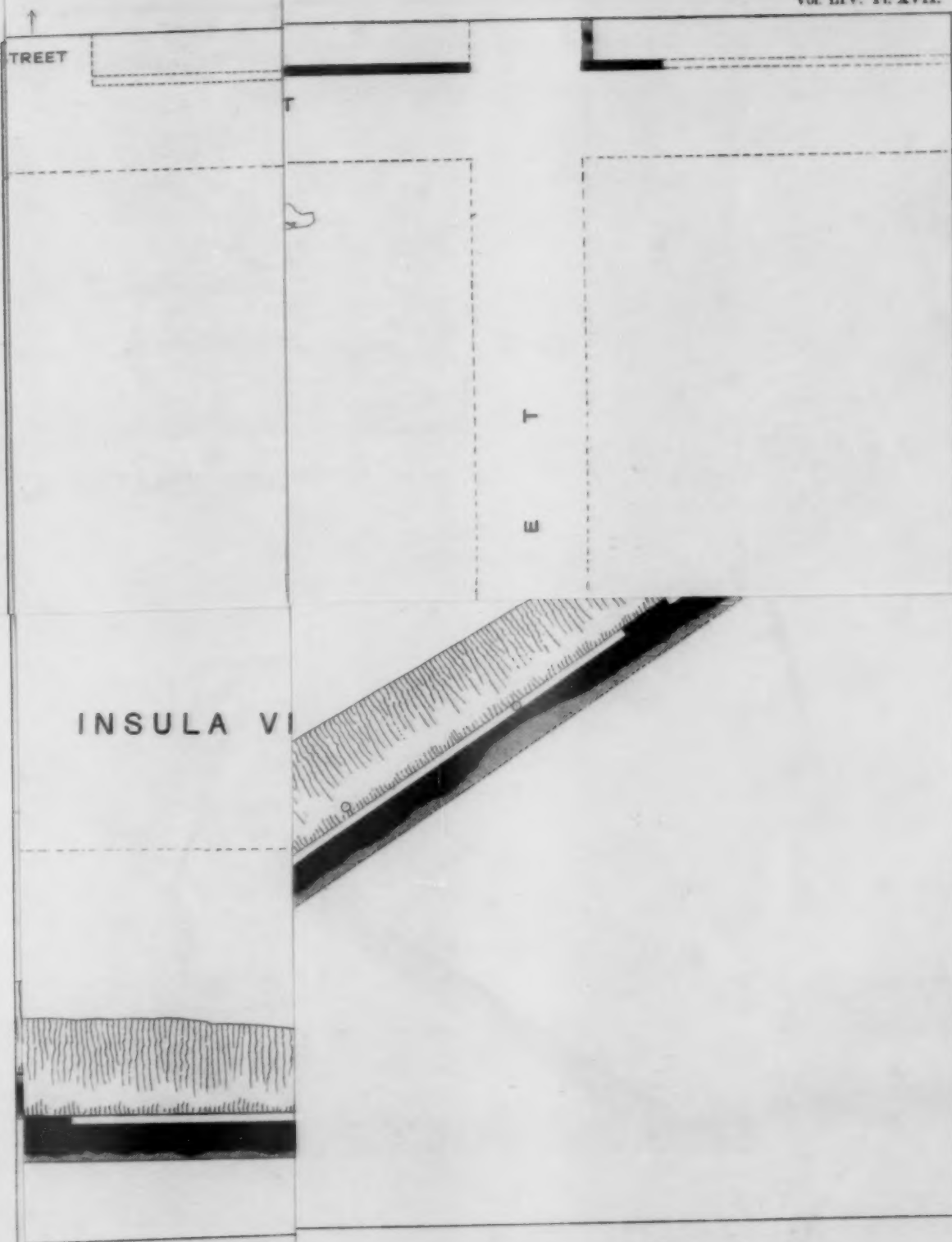
<sup>b</sup> Edward A. Freeman, *English Towns and Districts* (London, 1883), 163.

indicating apparently some large enclosure. The thickness of this wall is 2 feet; that of the other walls of the chambers 18 inches. With the exception of these remains, and an opening in the boundary wall 6 feet wide, occurring at 153 feet from the south-east corner of the *insula*, there is nothing further to be noted on this south side. The east side has a well-marked boundary wall to the street, but is still more empty of constructions, only a little rectangular chamber,  $12\frac{1}{2}$  feet by 8 feet, with walls 2 feet  $7\frac{1}{2}$  inches thick, occurring upon the line, at a distance of 76 feet south of the lane previously mentioned. One other fact may be noted. The boundary wall on the street on this side from the corner of the lane to the north-east angle is deflected slightly eastwards, making thus a slight bend in the direction of the street.

On the north of the *insula* the line of wall bounding the roadway is more or less traceable throughout its whole length.

Having now completed the description of *Insula VII.* the next, *Insula VIII.*, claims our attention. This may well be called a double one, for it takes in the whole breadth of *Insula VII.*, that of the yet unexplored *insula* to the east of it, and the width of the roadway between them. It is due south of the two *insulae* just named, and is divided from them by a street or road between 18 feet and 19 feet wide. This road, it may be noted in passing, where it runs by House No. 1, had some traces of a central gutter pitched with flints. The eastern boundary of the *insula* was formed by a road running north and south, which touched the eastern extremity of the baths situated in this *insula* near the south-eastern angle. The chief way through the city from the south to the north gate bounded it on the west, the south gate of the city being at its south-west angle, and the city wall was its limit on this side, the wall being parallel with the northern road except for a length of 160 feet at the south-east corner, where, just below the baths, it makes an angle in its course and runs north-east. The whole *insula* was thus a parallelogram 680 feet from east to west, by 470 feet from north to south, with a part of its south-east angle cut off. Except where the walls of the houses show them, the limits of the *insula* can only be made out on the north, east, and west sides by the gravel of the roadways, as no boundary walls now exist.

As is well known, the city wall throughout is backed by a mound of earth. In its course on the south side of the *insula* uncertain traces were come upon of a roadway, 27 feet wide, lining the mound. This roadway may have accompanied the bank and wall all round the city; excavations at different points will be needed, however, to confirm this supposition.



INSULA VI

OF INSULA VIII.

E  
R  
T  
S

HOUSE (7).  
NO. 3

PIT B

PIT E

PIT C

WELL

PIT D

HOUSE NO. 4.

1

2

3

4

5

6

HYP.

8

9

PIT G

10

PIT F

11

13

12

COURT

PIT H

PIT I

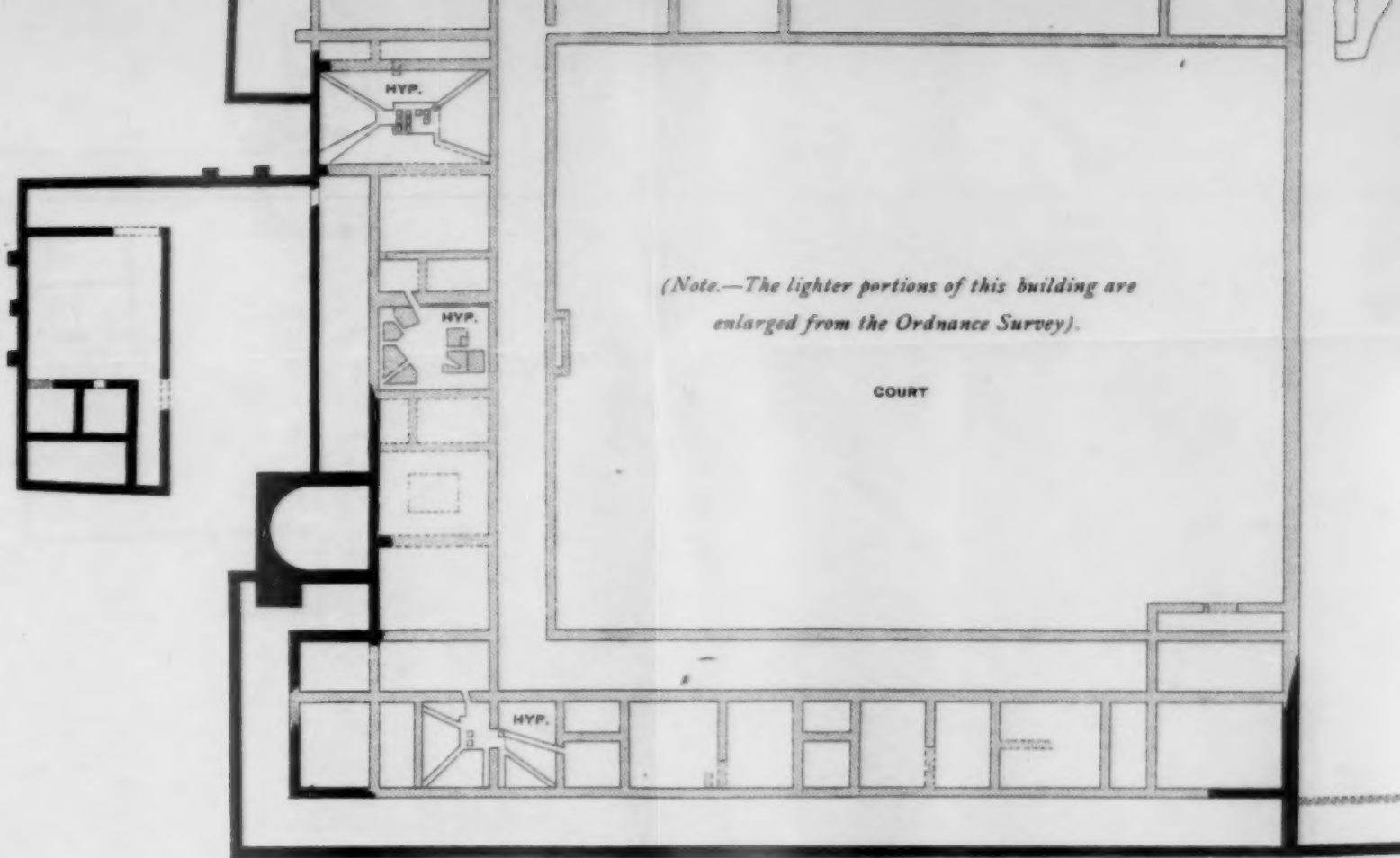
PIT J

S  
T  
R  
E  
E  
T

SOUTH  
GATE

0 10 20 30 40 50 60 70 80 90 100

200 Feet



HOSPITIUM

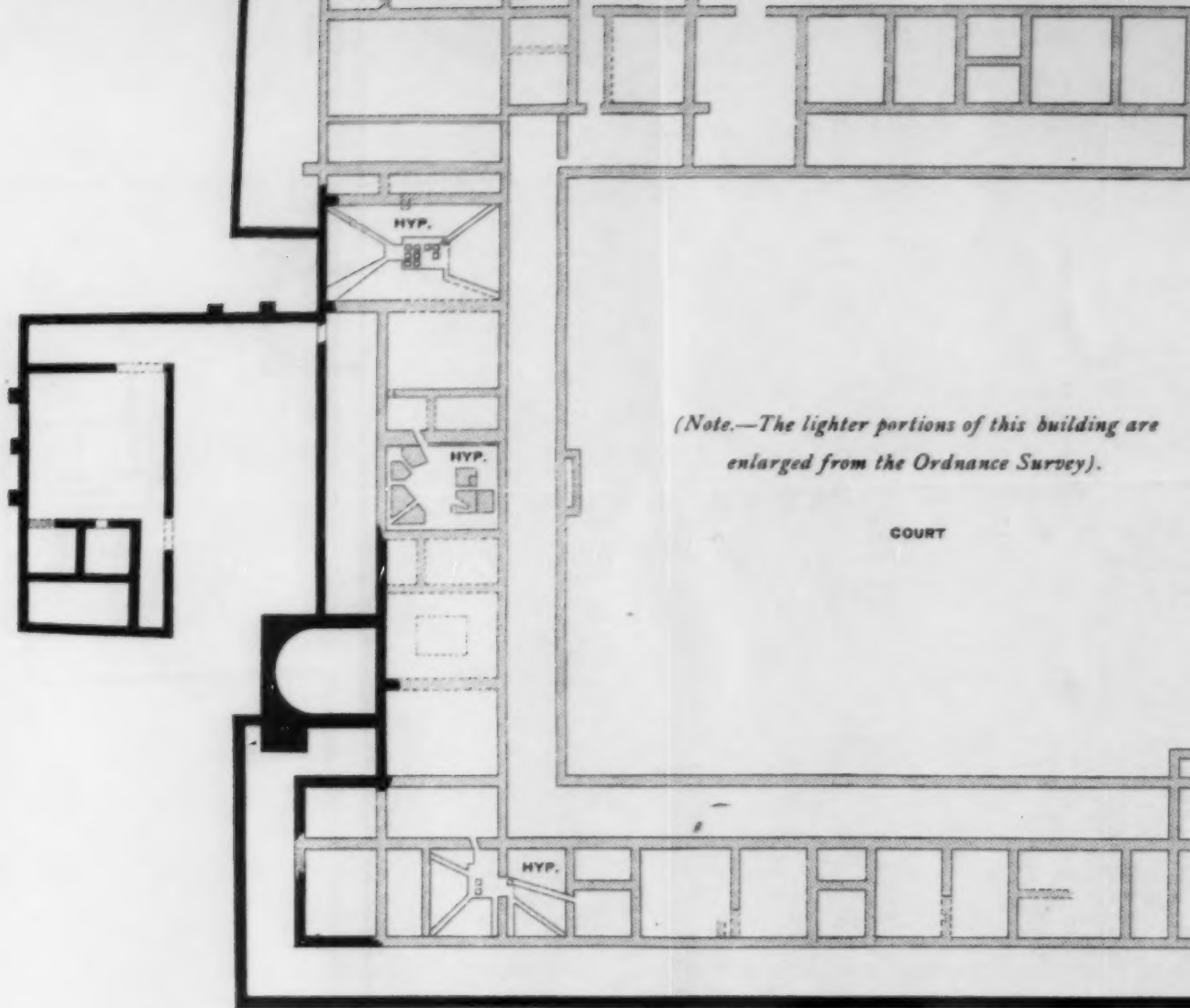
INSULA VIII.

T (?)

S T R E

SILCHESTER.—PLAN OF INSULA VIII.





*(Note.—The lighter portions of this building are enlarged from the Ordnance Survey).*

COURT

HOSPITIUM

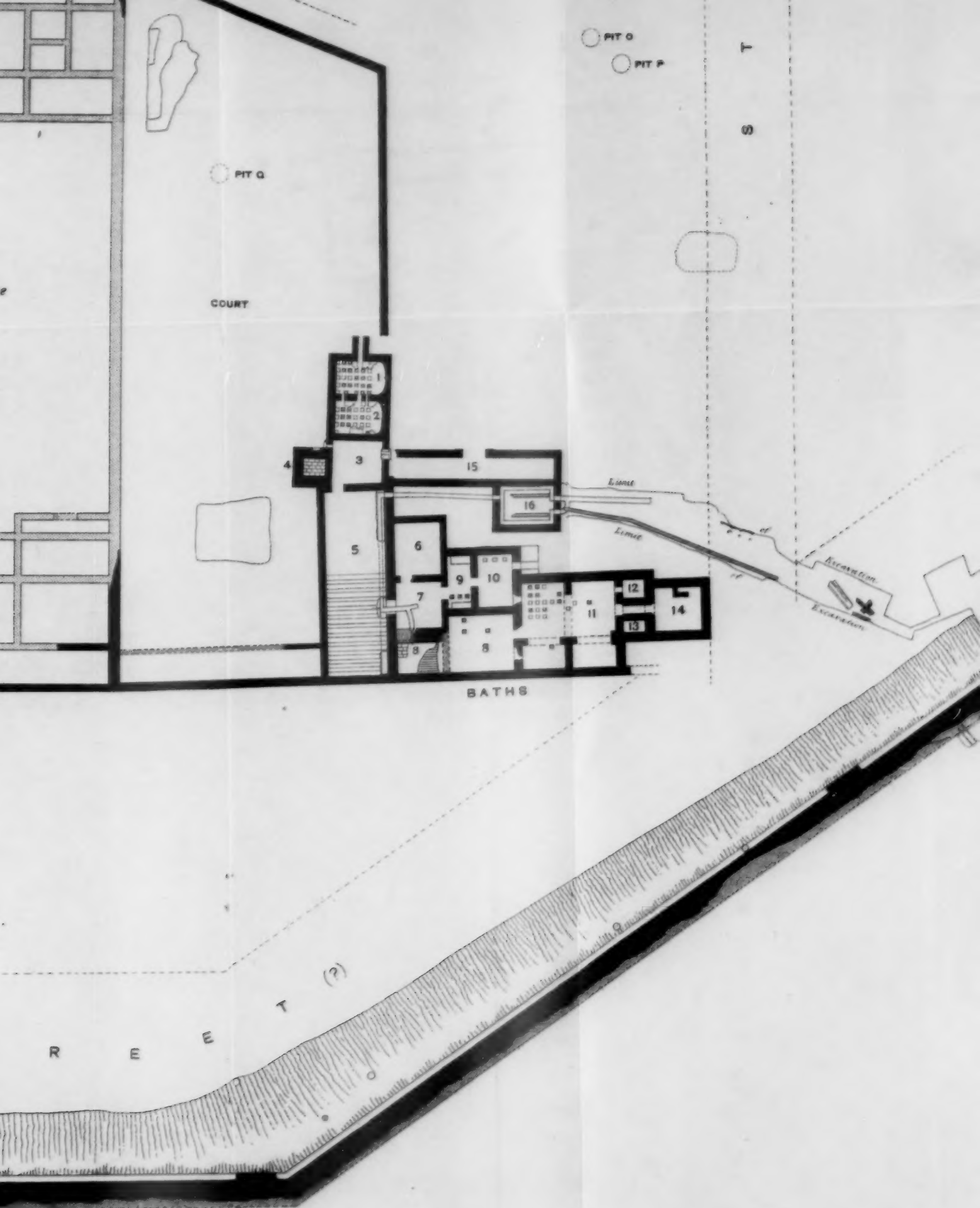
INSULA VIII.



PIT J

E E T (?)

S T



T  
E  
E  
R  
S  
T

S T R E E T

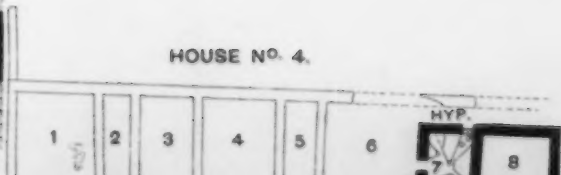
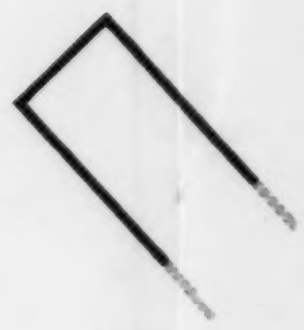
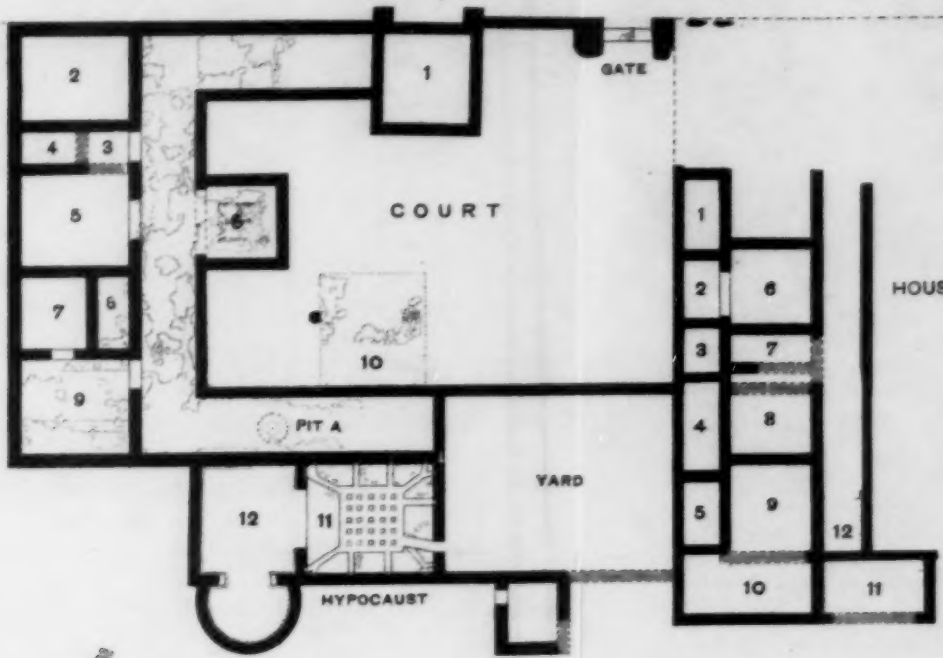
HOUSE NO. 1.

HOUSE NO. 2.

HOUSE (?)  
NO. 3

PIT C   WELL   PIT D

HOUSE NO. 4.



STREET

S

OPEN



GATE

HYP.

HYP.

*(Note.—The lighter portions of this building are enlarged from the Ordnance Survey).*

COURT

HYP.

STREET

HOUSE N<sup>o</sup>. 2.



GATE

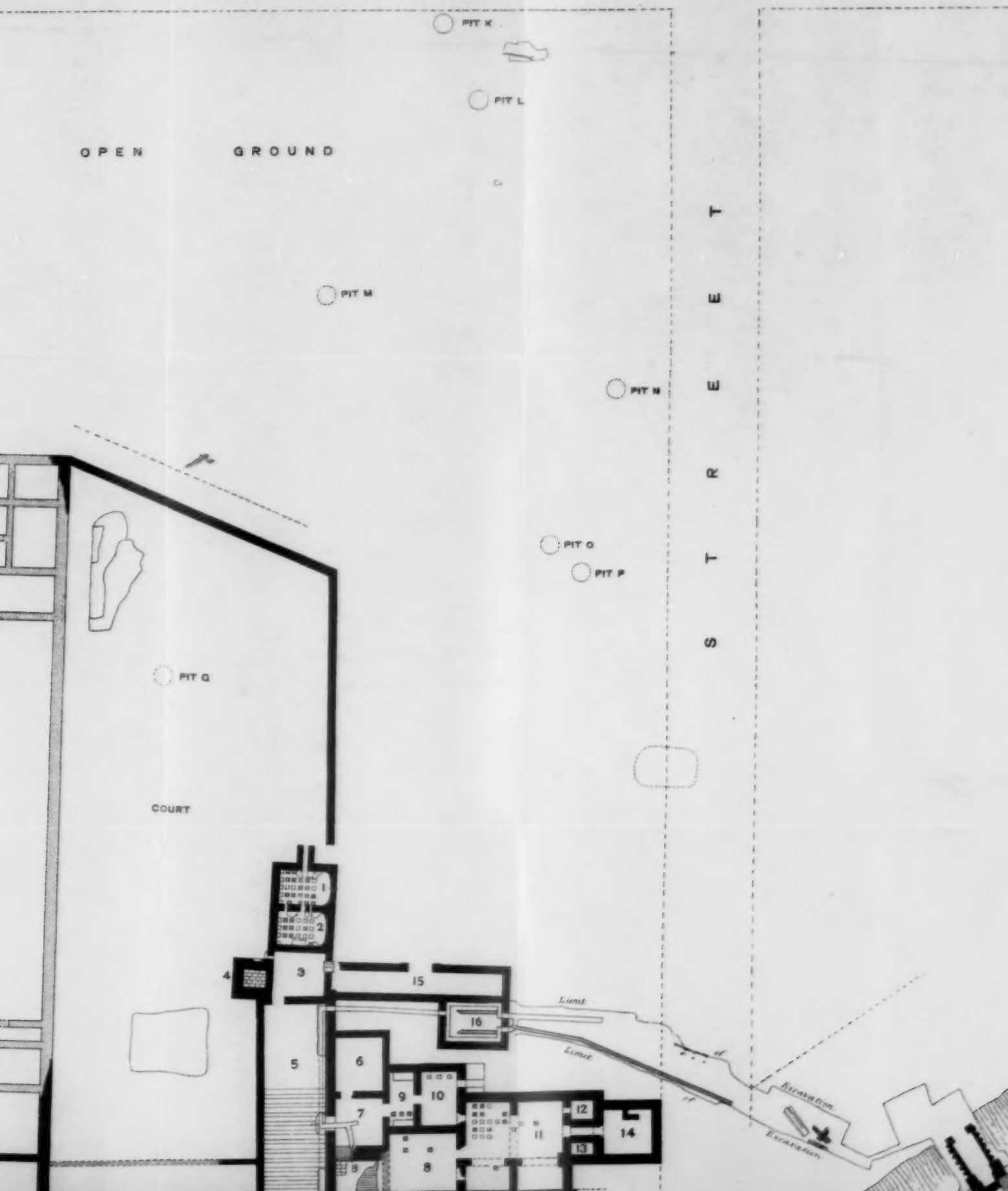
HYP.

HYP.

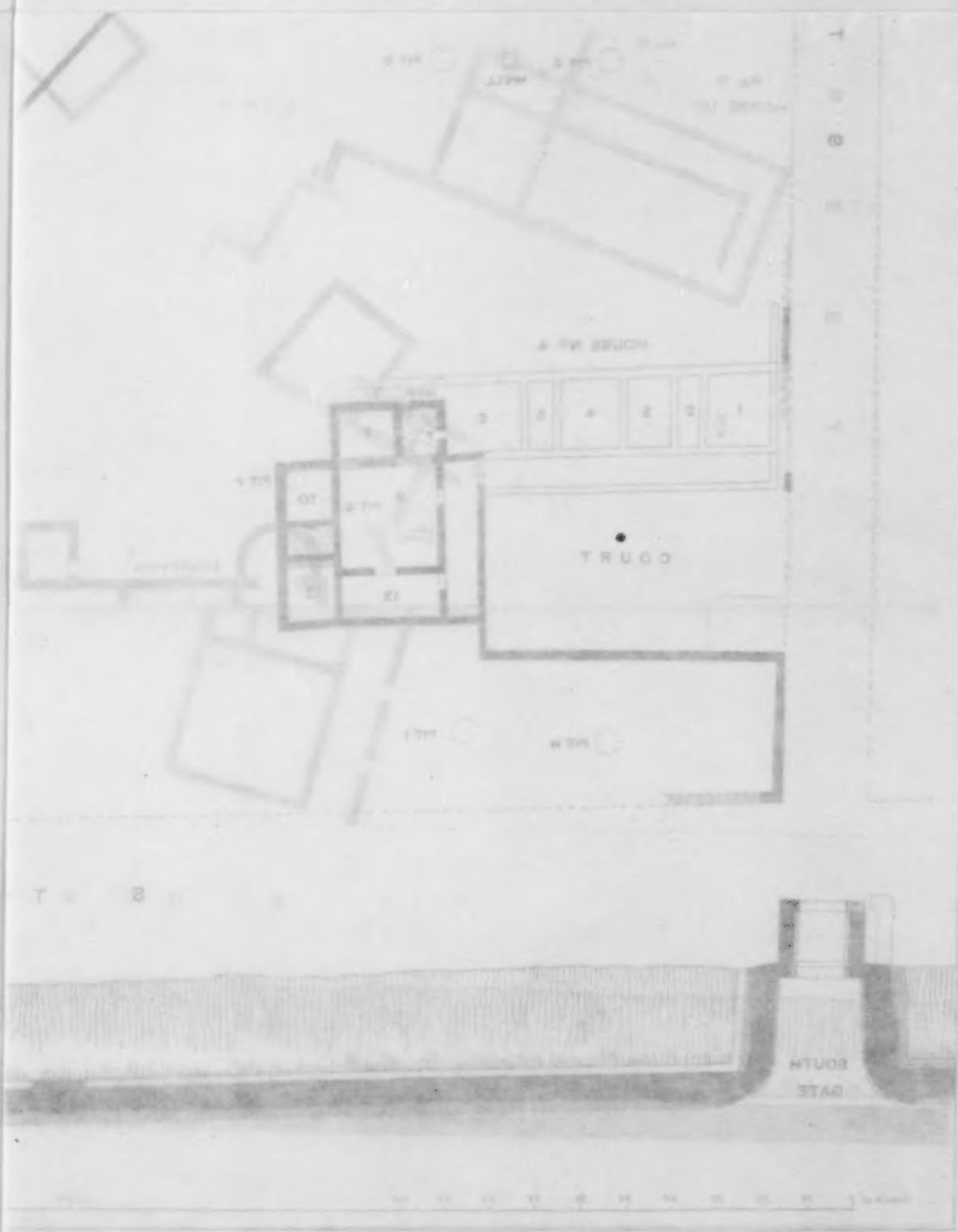
*(Note.—The lighter portions of this building are enlarged from the Ordnance Survey).*

COURT

HYP.







SILCHESTER-PLAN

As in *Insula VII.* so in the one under consideration, the buildings lay for the most part on the western side, with one great exception. House No. 1, situated on the street to the north, at some distance from the corner of the *insula*, was built round a courtyard, the eastern side of which had as its boundary House No. 2. This was a long building of the same type, or nearly so, as House No. 2, *Insula VII.*, and lay north and south, with one end to the roadway. At a short distance, about 20 feet or 30 feet, south of House No. 1, some foundations of irregular shape occurred, trending north-west and south-east, but too fragmentary to make any conjecture probable as to the building of which they had formed part. Again, 100 feet due south of Houses Nos. 1 and 2 other foundations were found, apparently of some long rectangular enclosure, the direction of whose main walls was also roughly north-west and south-east.

About 160 feet south of the north-west angle of the *insula*, and close to the main roadway, more foundations and faint traces of walling revealed themselves. These were possibly the remains of a small house of the long form, with a corridor on its southern side, but of which the partition-walls, with two exceptions, had been swept away. It cannot, however, be called a house with any certainty. The axis of the foundations was not at right angles to the roadway, but declined considerably to the south.

Another building, evidently a house, occurred near the south gate, and upon the main roadway. It had originally been one of the long form, with its end to the street, but large additions at the east end had considerably modified its plan. It has been called House No. 3.

All these buildings were situated in the western part of the *insula*.

The whole eastern portion was filled by a large edifice probably of a quasi-public character, having the baths with their courtyard attached to its eastern side. This will be described later on.

Some fragments of walling, showing a square enclosure with a long corridor east of it, and with another starting northward from its north-western corner, were dug out at about 42 feet from the south-west angle of this large edifice. The main lines had a north-east inclination, and the building, of which these fragments were the remains, probably formed a dependency of the establishment near it.

Proceeding now to a more detailed description of the different structures of the *insula*, and beginning with House No. 1, it may be remarked that it was one of the most interesting yet found on the site. Not so much for its size, though that was not inconsiderable, but because it offered a very perfect specimen of a

dwelling built round a courtyard, and that, grouped with it, is another (No. 2) exhibiting the type of habitation, which, like the houses in *Insula VII.*, consisted of a range of chambers between corridors, or with a corridor attached to one side only.

The majority of the houses discovered up to the present time at Silchester may be classed under one or the other of these types, which for distinction may be named the corridor type and the courtyard type, although both classes were often modified by the omission of one feature or the addition of another according to circumstances. At this angle of *Insula VIII.* the two types are juxtaposed in a very instructive fashion, and in a way in which each can be readily understood.

It will be seen, by reference to the plan (Plate XVII.), that House No. 1 did not stand quite at the north-west corner of the *insula*, but was 73 feet distant from it. In this respect there was a certain similarity of arrangement between it and House No. 1, *Insula VII.* The intervening space was probably a garden, but at the north-west angle traces of burnt flooring, scarcely sufficient to indicate the hypocaust of any building, may show that a blacksmith's forge stood at the corner of the two streets.

The body of the house consisted of the usual row of chambers, all of the same length unless transversely divided, with a corridor on its eastern side. The range stood north and south, with its end to the street. At each end of the range the corridor was returned to form wings north and south. The northern consisted of a corridor only, 32 feet long, which lined the street, and had at its eastern end an ample vestibule. The southern wing was formed by a corridor 43 feet long, with two important chambers attached to its south side. The north wall of this southern corridor was prolonged to meet the west wall of the adjacent house. On the north another wall, with a gateway in it, ran from this house to the vestibule, and thus completed the enclosure of a courtyard, whose greatest dimensions may be taken at 64 feet from north to south, by 85 feet 6 inches from east to west. The western side of the courtyard was much encroached upon by chambers projecting into it; the traces of a considerable one occurred above the east end of the southern corridor, and another projected eastwards from the centre of the main corridor of the house. The area was further encroached upon by the vestibule, so that the main plan of the house much resembled a letter E.

The vestibule (1) before mentioned was entered from the street, and was of ample dimensions, being 16 feet square. Upon the street two bases of tile, each 3 feet 6 inches wide, with a projection of 2 feet 8 inches, flank the entrance. They were probably foundations for attached columns supporting an entablature and pediment, so that the entrance to the dwelling had some architectural pretensions.



of the Roman city at Silchester, Hants, in 1893.

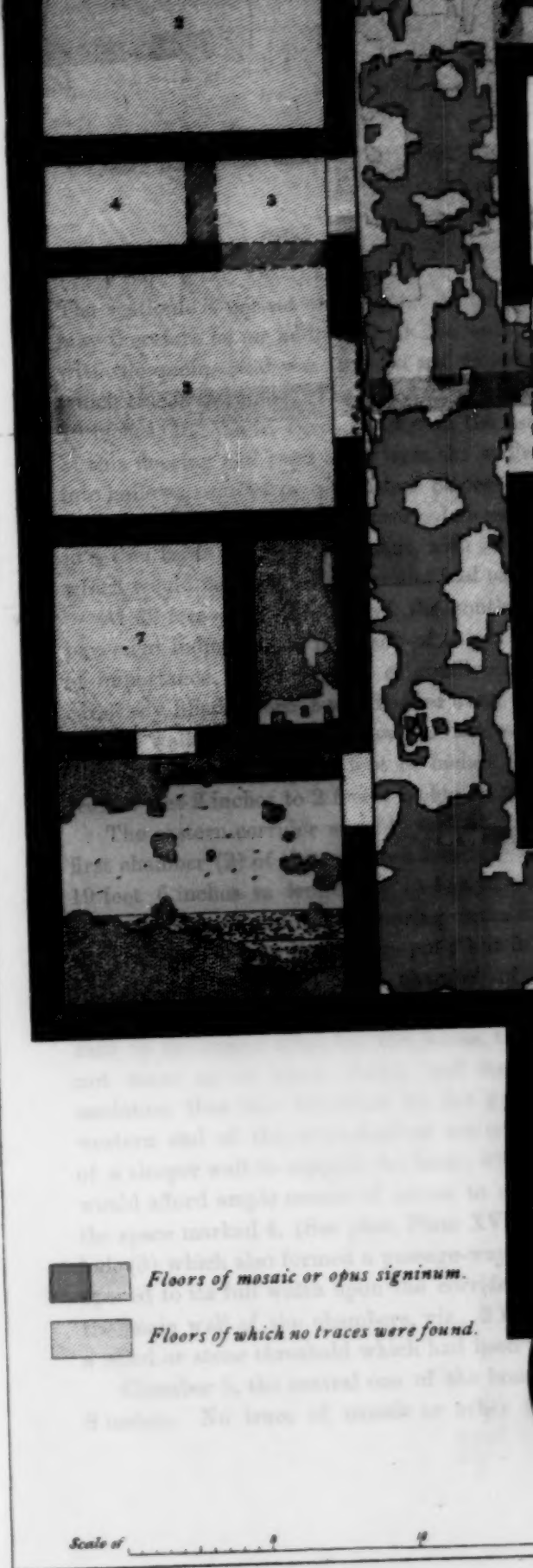
yard, and that, grouped with it, is another (No. 2) on, which, like the houses in *Insula* VII., consisted of a corridors, or with a corridor attached to one side only. Uses discovered up to the present time at Silchester the other of these types, which for distinction may and the courtyard type, although both classes were n of one feature or the addition of another according ngle of *Insula* VIII. the two types are juxtaposed in d in a way in which each can be readily understood.

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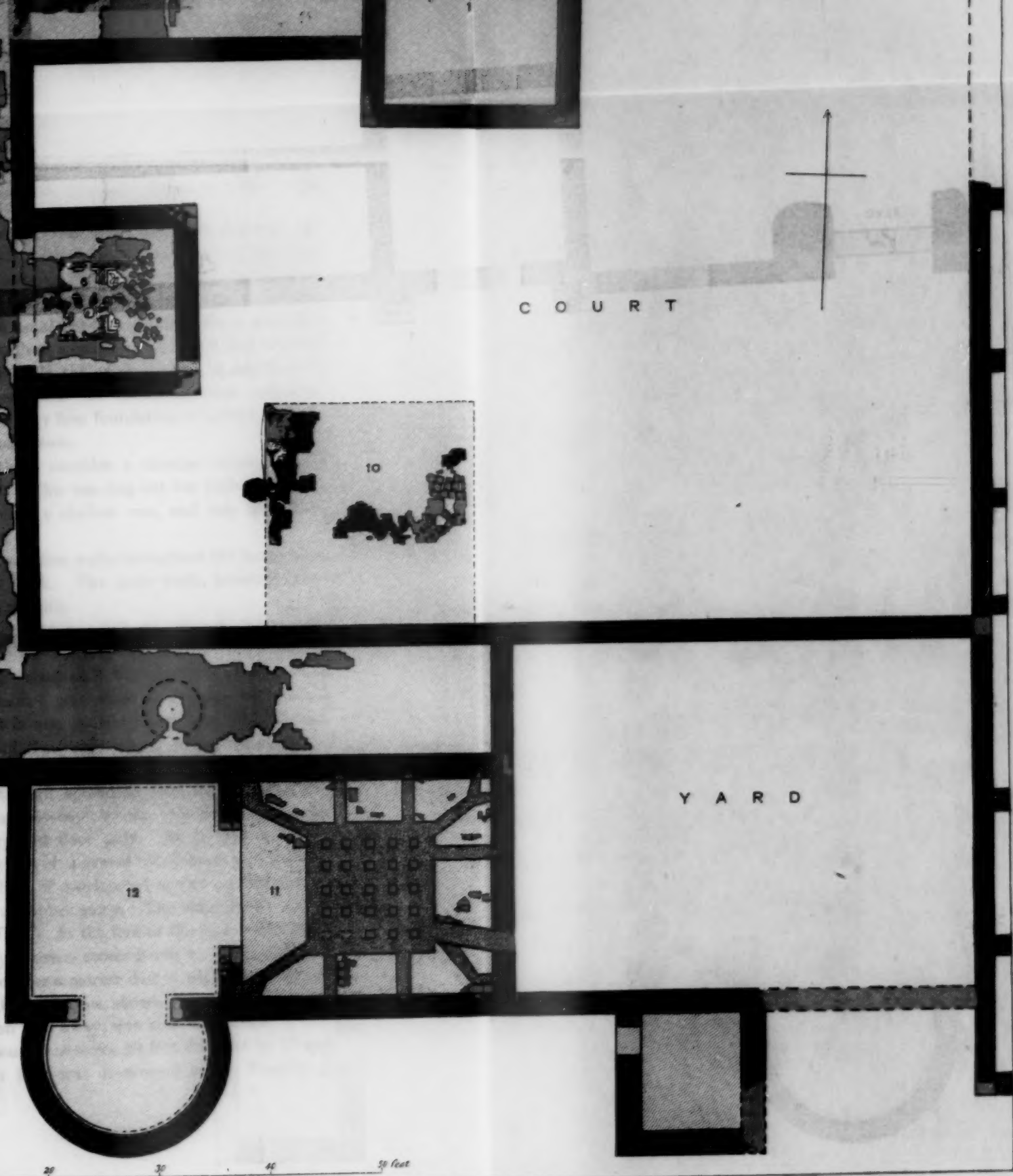
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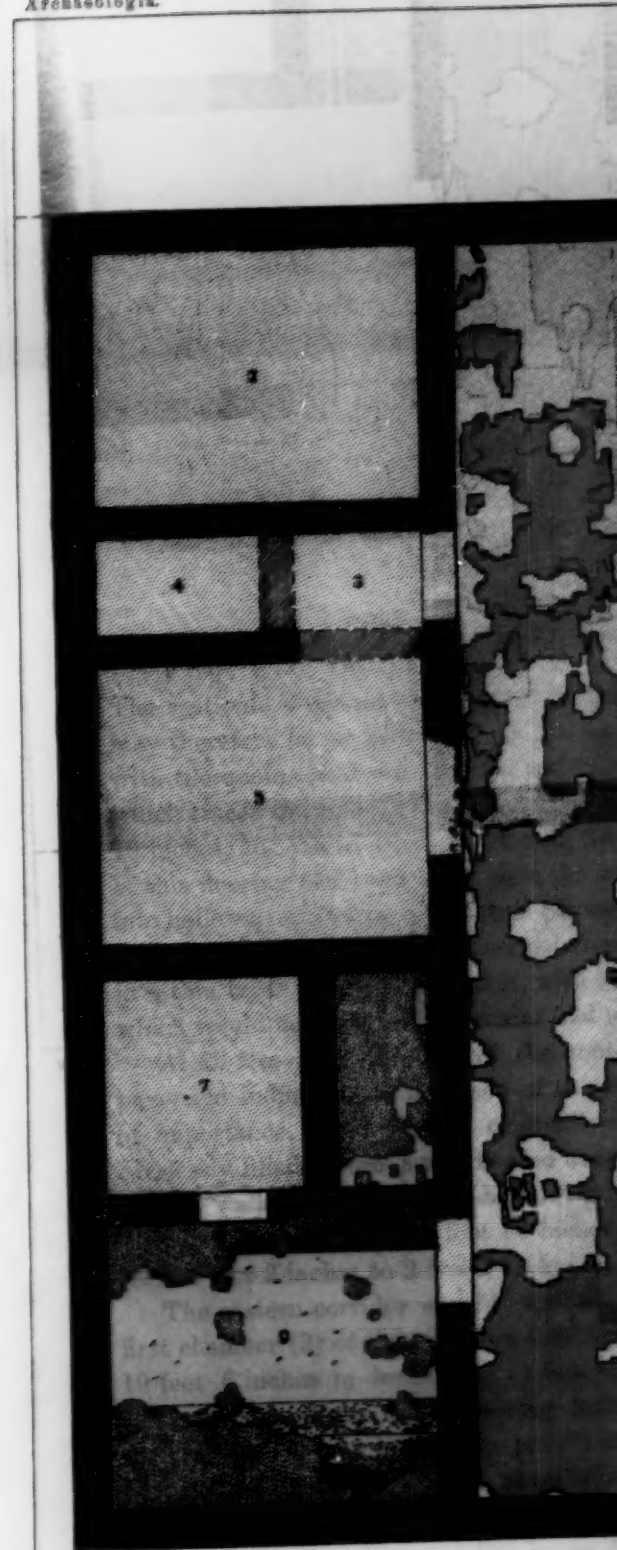
SILCHESTER.—PLAN OF HOUSE No. 1. INSULA VIII.



site of the Roman city at Silchester, Hants, in 1893.

courtyard, and that, grouped with it, is another (No. 2) imitation, which, like the houses in *Insula VII.*, consisted of a series of corridors, or with a corridor attached to one side only. The houses discovered up to the present time at Silchester are of two types, which for distinction may be called the corridor type and the courtyard type, although both classes were subject to variation of one feature or the addition of another according to the plan of *Insula VIII.* the two types are juxtaposed in the plan, and in a way in which each can be readily understood. In reference to the plan (Plate XVII.), that House No. 1 did not occupy the north-west corner of the *insula*, but was 73 feet distant from it, and there was a certain similarity of arrangement between it and the houses in *Insula VII.* The intervening space was probably a garden, but traces of burnt flooring, scarcely sufficient to indicate the position of a blacksmith's forge stood at the

consisted of the usual row of chambers, all of the same size, and divided, with a corridor on its eastern side. The range of chambers ran from its end to the street. At each end of the range the chambers formed wings north and south. The northern wing, which lined the street, and had at its eastern end a gateway, the southern wing was formed by a corridor 43 feet long, with chambers attached to its south side. The north wall of this corridor belonged to meet the west wall of the adjacent house. On the north wall a gateway in it, ran from this house to the vestibule, the enclosure of a courtyard, whose greatest dimensions may be measured north to south, by 85 feet 6 inches from east to west. The courtyard was much encroached upon by chambers projected from the north wall, of a considerable one occurred above the east end of the courtyard, which projected eastwards from the centre of the main range. The area was further encroached upon by the vestibule, and the house much resembled a letter E. The house mentioned was entered from the street, and was of ample



Floors of mosaic or opus signinum.

S T R E E T

GATE

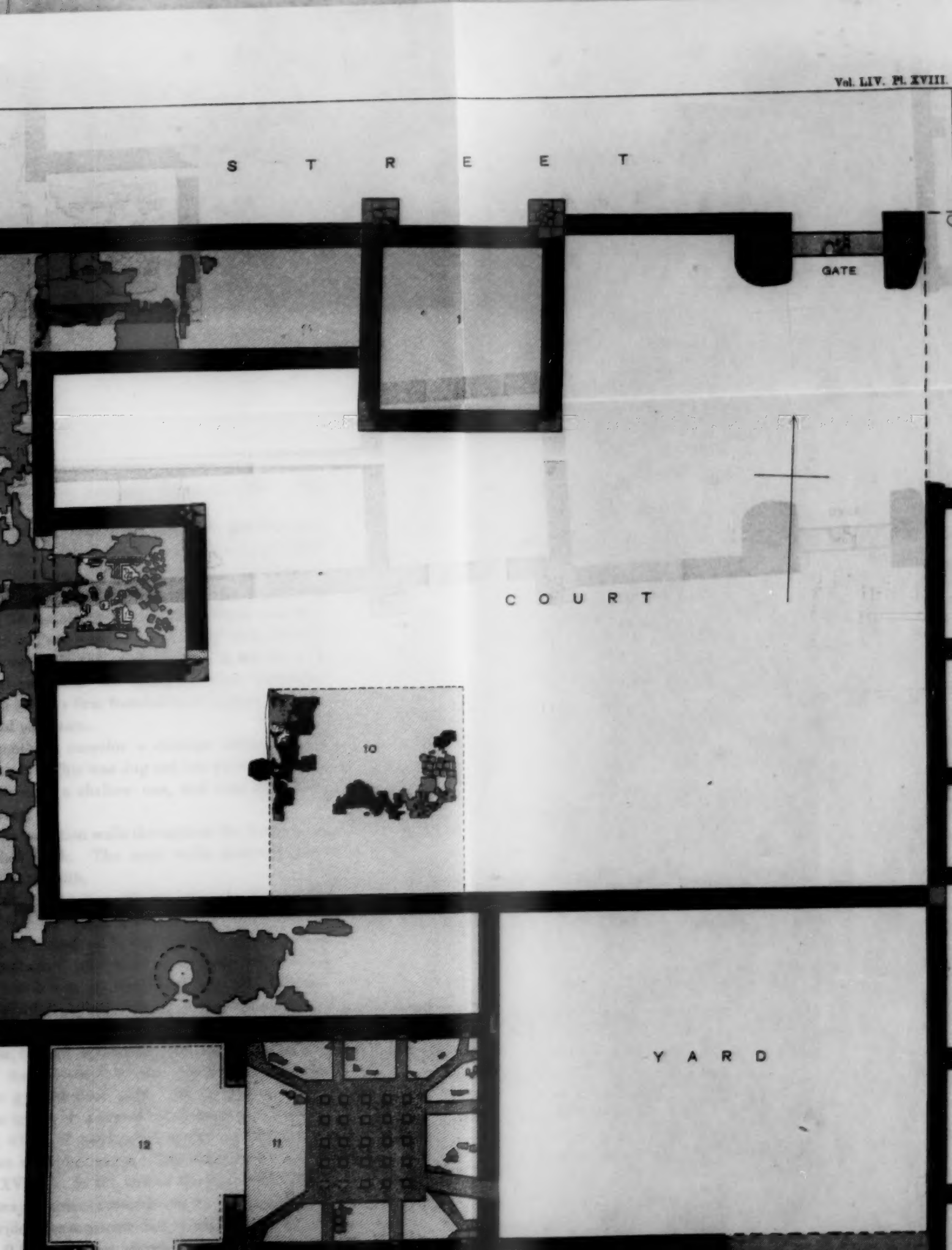
C O U R T

Y A R D

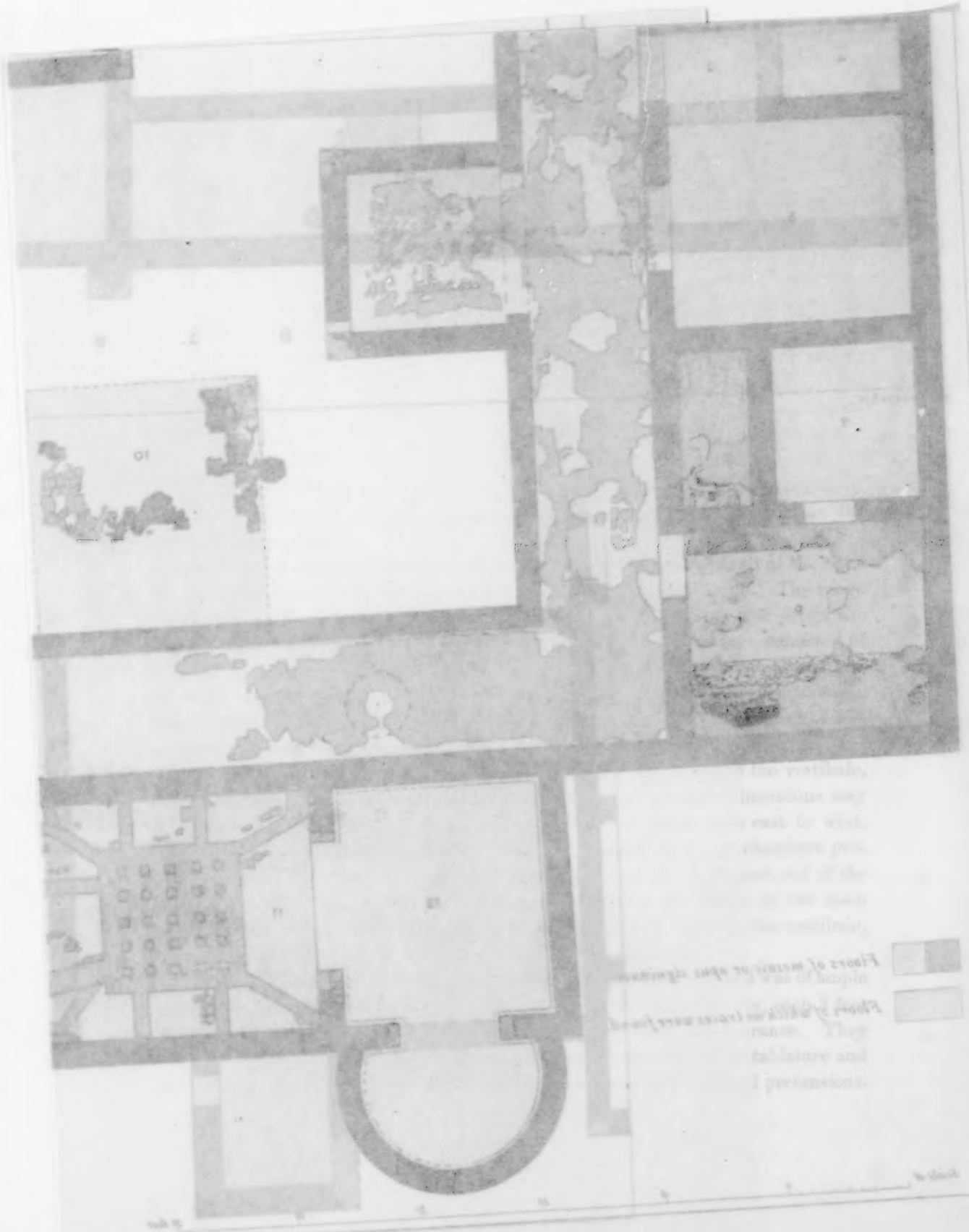
10

12

11



SILCHESTER-PLAN OF HOUSE NO. 11250



The vestibule is not set quite square with the corridor to which it is attached, and may therefore be an addition. It had well built walls of flint rubble 2 feet thick with tile quoins, and was paved if not with mosaic at least with *opus signinum*, of which traces remained. The three corridors were all of the same width, viz., 9 feet 10 inches, and paved throughout with the usual red-tile *tesserae*. What remained of this flooring had sunk away from the walls to a considerable extent and subsided into hollows, so that in only a few places could the original level be ascertained. A section of it where best preserved showed that the *tesserae* had been embedded in a thin layer of the pink cement, with no very firm foundation of mortar beneath, which would account for its present bad condition.

At 29 feet from the end of the southern corridor a circular sinking in the pavement indicated the presence of a pit. This was dug out but yielded nothing of importance. The pit was originally only a shallow one, and may have been carelessly filled before it was floored over.

The walls of the corridors and all the partition walls throughout the house were from 1 foot 9 inches to 1 foot 10 inches thick. The main walls, however, were from 2 feet 2 inches to 2 feet 3 inches in breadth.

The eastern corridor was  $74\frac{1}{2}$  feet long. At its northern end was situated the first chamber (2) of the range constituting the body of the house. It measured 19 feet 6 inches in length by 15 feet in width, and was probably entered from the corridor. None of its flooring remained, and there is nothing to indicate to what use it may have been put; but it may possibly have been the kitchen. Dividing it from the central chamber of the range was a compartment of the same length, 5 feet 9 inches wide. It is possible that this contained a staircase to an upper floor, for the house, though spreading over a large area, was not made up of many rooms, and its possessor would require more accommodation than was furnished by the ground floor only. At 10 feet from the western end of this compartment are traces of a gravel foundation, perhaps that of a sleeper wall to support the stair, which, if constructed in two narrow flights, would afford ample means of access to an upper story. The stair would occupy the space marked 4. (See plan, Plate XVIII.) At the foot of the stair was a vestibule (3) which also formed a passage-way between rooms 2 and 5. This vestibule opened to its full width upon the corridor, for a mortar bed of the same width as the main wall of the chambers, viz., 2 feet 3 inches, showing the print of either a wood or stone threshold which had been torn away, was here uncovered.

Chamber 5, the central one of the house, measures 19 feet 6 inches by 16 feet 8 inches. No trace of mosaic or other floor was discovered here. Possibly it



was of cement, which has perished. The room had an entrance from the main corridor through an opening 7 feet 2 inches wide, showing traces of the mortar-bed of a sill like that to the vestibule (3). It may have been the summer *triclinium*, lighted on the garden side by wide apertures divided by piers in which would be hung glazed frames. The stone base of one such pier (Plate XIX. fig. 3) was dug up to the south of this house. In fact the position of the room, with large openings on the garden, taken with the neighbouring *tablinum* next to be mentioned, suggests an arrangement not unlike that of a Grecian *æcus*, as mentioned by Vitruvius.<sup>a</sup>

Opposite to this chamber on the other side of the corridor was another (6), 13 feet square. It projected into the courtyard with walls 2 feet in thickness, with strong tile quoins. It had a central panel 7 feet square of good mosaic set in a ground of red-tile *tesserae*, unfortunately nearly all perished. The panel was divided into four smaller squares by bands of simple braid-work, of which brownish-black, white, grey, and red were the only colours, and the white grounds of the squares appear to have contained rosettes or other figures. The *tesserae* were half an inch and under in size and laid in pink cement. The white ones appeared to be of clunch, the black or brown of ironstone nodules from the Kimmeridge Clay,<sup>b</sup> while the red were of the usual tile. A mass of red tiling covered the ground on the east side. Some of it may be a rude patching of the pavement, some was evidently fallen rubbish. With the exception of piers on each side, with a projection of 1 foot 3 inches, the chamber opened upon the main corridor to its full width. And here a curious fact may be observed. Across the opening the red tessellated floor, which is continuous with that of the corridor, shows a ridge where it is laid over the sleeper wall passing across the opening, the floor having sunk on either side of it. This is one of the few spots where the original level of the corridor floors could be ascertained with certainty, and it is five inches above the mortar beds of the thresholds of chamber 4 and the vestibule 3. A break in the wall at the south-east corner of the room may have contained a drain pipe to carry off the water used in washing the floors. Instances of this arrangement have been found elsewhere on the site.

This chamber was doubtless the *tablinum* of the house, and had evidently been purposely placed opposite the *triclinium*, to which it opened widely across the corridor, perhaps with some intention of creating a vista through the whole width of the dwelling.

Passing 7, which was 12 feet by 13 feet, and in which no flooring was

<sup>a</sup> Book vi. cap. vi.

<sup>b</sup> For information respecting this and other geological matters we are indebted to Horace B. Woodward, Esq.

FIG 2.

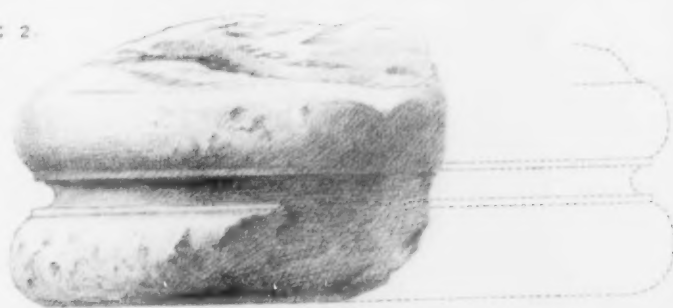
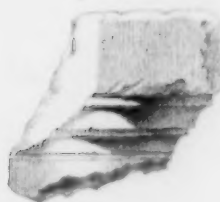


FIG 1.



TOP.

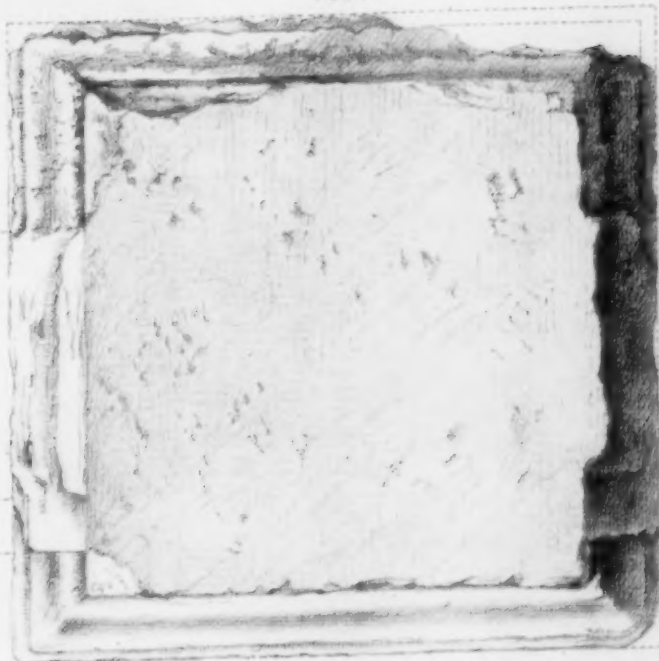
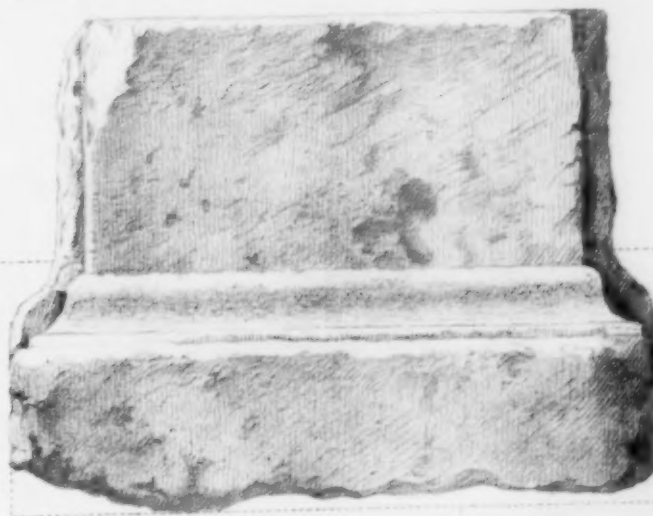


FIG 3.



SCALE OF 12" 9" 6" 3" 0" 1 FOOT

C.P. Keil, Printer, & Furnival St. Holborn London, E.C.





observed, though some tile fragments might seem to indicate it, through the passage 8, which was 13 feet long by 5 feet 9 inches wide, with traces of a plain mosaic floor of sandstone *tesserae*, the last room (9) in the range is reached. This chamber, measuring 19 feet 6 inches by 17 feet, has a considerable portion of its mosaic floor still intact. Its *tesserae* are largely blotched with signs of fire, which is also the case with what remains of the flooring of the passage (8). In places the stones are burnt to a purplish red. The pavement is remarkable for its peculiar design. The body of it is composed of the drab sandstone so often used in pavements at Silchester, and is dotted here and there with single black *tesserae*. Along the north wall of the room runs a border 1 foot 10 inches wide of one-inch black *tesserae* with a sprinkling of red and drab, and along the south wall a much wider band, in which red and black are jumbled together without apparent design. It seems as if an attempt had been made to lay these in alternate bands of drab and black, but that such an attempt had been speedily abandoned. This pepper-and-salt style of work was to be seen in the floors of House No. 1, *Insula I.*, before they had become disintegrated by exposure to frost. A section of the floor gave the following results: mortar bed in which the *tesserae* were set,  $2\frac{1}{2}$  inches thick; then a layer, 4 inches thick, of vegetable mould; next a mortar bed or floor, 3 inches thick; and then the natural earth. From which it may be presumed that traces of two floors of different dates may here be seen. The black *tesserae* of this pavement are of a ferruginous quartz-grit, perhaps from the Wealden beds of Swanage Bay. Besides the doorway into the passage (8) there were others from this chamber into room 7, and at its north-eastern corner into the main corridor. The lighting of both 7 and 9 must have been by windows in their western walls, whilst the passage (8) may have received sufficient illumination from a window giving on the corridor.

Proceeding now along the southern corridor, at its eastern end will be found the traces of a chamber (10) projecting northwards into the courtyard. Scarcely anything of its walls remained nor even of their foundations, but from east to west it had probably a breadth of 19 feet and could hardly have measured less than 20 feet in length. The east wall could only be made out by a relic of its gravel foundation, the west by one rough mass of clunch, and singularly enough by a continuous line of the wall plaster, which remained for an inch or two in places above the floor, whilst the wall to which it had been attached had utterly disappeared. Some fragments of mosaic showed the former existence of a black tessellated floor composed of the same material as that in chamber 9. The floor

had been woefully patched both with red and drab *tesseræ*, and also with fragments of tile. Nothing further could be learnt as to this chamber.

On the opposite side of the corridor, and in nearly a corresponding position to 10, was situated the winter room of the house (11). It measured from 22 feet 9 inches from east to west by 19 feet 6 inches from north to south, being thus the largest room in the mansion. It was warmed by the usual composite hypocaust, viz. a central pit smaller in dimensions than the room, with passages of the same depth as the pit, diverging from it to the wall flues. The pit or warming chamber in this instance was nearly a square of 11 feet 8 inches, and originally contained twenty-five *pilæ* formed of small tiles from 8 to 9 inches square and  $1\frac{1}{4}$  inch thick with wide mortar joints. These *pilæ* were on the average 1 foot  $3\frac{1}{2}$  inches apart with the exception of the last two rows, the space between which was only 11 inches. The width of the passages from the heating chamber to the wall flues was 1 foot. The furnace flue was situated at the south-east angle of the pit, and passed in a slightly curved line from it through the wall to the exterior opening, originally covered by a brick arch, situated 3 feet 9 inches north of the external angle of the building. It was 1 foot 11 inches broad and lined throughout with tiles, which were baked to a grayish colour from the constant heat to which they had been subjected. At the same angle occurred the passage leading to the wall flues at this corner of the chamber. Its floor, unlike that of the others, was raised a foot above that of the pit, which is to be accounted for by its having its entrance in the furnace flue, the height named being given to prevent the fuel in the furnace from blocking it up. The raising of its floor also caused a better draught. The position of the wall flues can be traced throughout, and fragments of the box flue tiles still remain. There were four wall flues in the north wall, as many in the south, three in the east wall, two in the west wall near the north-west angle, and one in the same wall at the south-west corner; in all fourteen, which were found sufficient to heat not only this large room, but the one beside it also. The floor of the hypocaust pit was of mortar, and the sides and passages had been plastered. The height of the *pilæ* was probably 2 feet 6 or 7 inches; they supported the floor of the chamber, the *suspensura*, which consisted first of two if not three layers of tiles, the lower layer being formed of large ones pierced with rows of holes to secure thoroughness in the baking. On these layers was spread a stratum of *opus signinum* of broken brick and lime, and then a layer of a finer quality of the same, in which the *tesseræ* of the floor were set. In all the thickness of the suspended floor was 10 or 12 inches. Some few of the *tesseræ* were found, of a hard and compact white

limestone, perhaps from near Corfe Castle. A single one of white terra cotta was turned up with them. These *tesseræ* were not found in chamber 11, but in a mass of rubbish from its destroyed floor, which had been accumulated in a layer just east of chamber 10. The layer seemed, as Mr. Hope has suggested to me, to have been deposited there when the *suspensura* of the hypocaust of chamber 11 had been removed for the sake of the bricks of which it was built. Amongst the rubbish were, besides the *tesseræ*, fragments of the wall plaster of the chamber, coloured yellow and red, and one piece which showed that the walls had been plastered twice, as the old coloured surface was to be seen beneath the newer layer applied against it.

To the west of room 11 lay another (12) of considerable proportions, measuring 19 feet 6 inches by 17 feet 6 inches, and communicating with it on the same level by an opening 10 feet 6 inches wide. The piers of this opening may have been of brick, as the lower courses, in that material, were in place. This room had at its southern end an apse, which however was more than a half circle, resembling, in fact, though with smaller dimensions, the partly circular room in House No. 2, *Insula I.* The apse at its widest part east and west measured 15 feet, and was 10 feet 6 inches deep. It communicated with the body of the room by an opening 8 feet 3 inches wide, the stone bases of the piers of which still remained. The floor of the room had sunk considerably towards the centre, but its original level might be seen between the piers of the apse where the sleeper wall had supported it. A thick quarter-round moulding of pink cement 3 or 4 inches wide formed a sort of skirting to the whole chamber. A fragment of a similar one was found against the west wall of the main corridor, and it may be noted in passing that this is a very common method of finishing floors in houses of the Romano-British period. The floor throughout the chamber and its apse was of *opus signinum*, with a fine finishing coat of white lime cement, which, when properly polished, must have shown an ivory-like surface, contrasting and heightening the colouring of the walls and giving great brilliancy to the chamber. When this chamber was dug out a bed of tolerably fine plaster lay evenly disposed upon its floor. Could this have fallen from above, and been in fact the plaster of a ceiling? If it was so, it is the first time that any instance of the existence of plaster ceilings has been observed in Romano-British houses. It is evident that these rooms were the principal ones of the house. Indeed, 11 and 12 may be said to have formed one great hall, as the two opened so widely one into the other. There was a door of communication in 12 with the southern corridor, but no other access, probably

in order that the heat generated by the hypocaust of 11 might not be dissipated by too many openings.

Yet one other feature requires a few words. To the east of the group of chambers just described lay a little courtyard, a kind of annex to the larger one. It was formed on the north and south respectively by the prolongations of the northern wall of the south corridor and the southern wall of chamber 11 to join the wall of House No. 2, which was its boundary on the east. It measured 42 feet in length by 31 feet 6 inches in breadth. Projecting from its south wall at some 9 feet from the south-west angle was a single rough cell about 10 feet square, with walls 26 inches thick. It doubtless had a door into it from the court, and certainly had a small one in its west wall leading to the grounds exterior to the mansion. In all probability it served as a habitation for the slave who held the office of gardener. His more important duty was to attend in winter to the maintenance of the fires in the neighbouring hypocaust, the stoke-hole of which was situated at this angle of the court. It is very probable that this court had a pentise round it. It would be entered from the larger one, and also from the end of the southern corridor. It must certainly have contained a wood shed, and the charcoal for the hypocaust was probably stacked in some part of it. Neither courtyard appeared to have been paved. The entrance to the larger courtyard is to be found at its north-east angle between two piers of flint rubble 9 feet apart. This opening was probably originally closed by folding gates.

We will now pass to the consideration of the next house of this *insula*, No. 2.

It has been pointed out that Houses Nos. 1 and 2 constitute a group exhibiting in close proximity the two classes of dwellings common on the site. The house just described was, as before mentioned, of the class which may be called the courtyard type. The next and adjoining one was a good specimen of what may be termed the corridor type.

This house (No. 2) stood north and south with one end to the street, bounding the *insula* on the north. Its west wall formed the boundary of the two courtyards of House No. 1. It had a length of 108 feet, for although the chambers at its northern end have entirely perished there is little doubt that the house extended to the street. The entire breadth amounted to 36 feet, and the average thickness of its inner walls was 1 foot 10 inches, of the corridor walls 1 foot 6 inches. The chambers constituting the body of the house lay between two corridors, and had a uniform length of 14 feet 10 inches. There were no transverse divisions in them. The width of the eastern corridor (the house faced the east) was 7 feet, while that of the western one was 4 inches less. In this

latter corridor there is a modification of the usual arrangement, for instead of being continuous from end to end, it was divided by partition walls into small rooms of various lengths. Chambers 2 and 6 appear to have communicated with each other by means of a wide opening so as almost to make one, and perhaps thus formed the *tablinum* of the house. The division 7, in its original state, opened widely on the eastern corridor. It seems at some period to have been altered into a mere passage. Room 12 may have been a vestibule at the south end of the east corridor, and its position would suggest that the southern rooms, 5, 9, 10, 11, were a suite separated from the rest of the house. Traces of alterations occurred here. The end room of the western corridor had been thrown into chamber 10, lengthening it considerably. Chamber 11 resembled 10 in being longer than its width; its east end projected some 12 feet beyond the line of the eastern corridor. The two chambers together have the effect of a long gallery at the southern end of the house.

No traces of winter rooms were to be found. It is possible that they were in the destroyed part of the house, but the excavations revealed no traces of them, although the ground was thoroughly examined.\*

No. 3, if indeed it was a house, has been already noted, we may therefore pass on to House No. 4, which was situated near the south gate of the city. Though a small one it presents some peculiar features. It shows very clearly how houses grew, and how, by additions, they were changed from one type to another. This dwelling originally consisted of a range of chambers (with its axis east and west) presenting its gable to the main roadway which bounds the *insula* on the west, and lay nearly at right angles to that roadway. The range was lined on the south side only by the usual corridor.

In process of time more accommodation was required, and to increase it a short new corridor was added at right angles to the old one and backed by a body of chambers, two of which were built on the partly demolished east end of the range of the old house.

Thus two sides of the courtyard had been formed. To change the original

\* The measurements of the different rooms of this house are as follows: From 1 to 5 inclusive are the chambers found in the western corridor. 1, 12 feet 9 inches by 6 feet 8 inches; 2, 10 feet 6 inches by the same; 3, 8 feet 2 inches by the same; 4, 15 feet 8 inches by the same; 5, 11 feet 6 inches by the same; 6, 13 feet 5 inches by 14 feet 10 inches; 7, 5 feet by the same; 8, 14 feet 6 inches by the same; 9, 15 feet 8 inches by the same; 10, 9 feet by 23 feet 6 inches; 11, 9 feet 5 inches by 18 feet 8 inches; 12, there are faint traces of a dividing wall here, which might show the existence of a chamber 9 feet 7 inches by 7 feet 3 inches.



house from one of the corridor type to one of the courtyard class now only required the addition of rooms forming a southern wing to correspond with that on the north. Here however the process seems to have stopped. A wall indeed is to be found running from the added body of chambers to the roadway on the west, but it was not bordered by either corridor or chambers, and south of it was nothing but vacant ground. The area formed by the two sides of this house and this wall was open to the roadway. The wall from the point where it touched this way returned southwards along it for about 33 feet, at which distance it seemed to make an angle with another. The traces of this were somewhat obscure, but it possibly was a boundary of a broad space accompanying and lining the defences of the city. The angle of the two walls was 21 feet from the north-east corner of the city gate.

But to return to the house. The older portion, as far as it exists, showed a length of 66 feet 6 inches, with a breadth of 27 feet. The length of its chambers averaged 15 feet, with no transverse divisions. The main walls of the range had a thickness of 2 feet, the partitions and corridor wall of 1 foot 6 or 7 inches. Rooms 2 and 4 and the corridor were floored with red *tesserae*. The corridor, which was 6 feet 6 inches wide, had a doorway at one end upon the street, and at the other a second communicating with the added portion of the house. There were also traces of a doorway, 5 feet wide, between rooms 3 and 4. The addition has far more interest than the older part, for with the exception of the corridor and the winter room (7), both Romano-British features, its plan closely resembles that of a small Pompeian dwelling. Looking at it from this point of view, 9, with its door of communication with the corridor, would represent the *atrium*; 13, also communicating with the vestibule and with 9, the *triclinium*; 8 the *tablinum*; 11 the kitchen, with its dresser of masonry on the south side; and 10 and 12 store or other rooms. The floor of 13 showed the following section: 3 inches of white cement on a bed of 2 inches of clay, beneath which was another, 5 inches thick, of white cement again, probably the remains of an earlier floor. In 9 the pavement was composed of tiles of two kinds, one from  $7\frac{1}{2}$  to 8 inches square and 1 inch thick, the size most often used for the *pilæ* of hypocausts, the other, long in form, 12 inches by 17 or 18 inches, and  $1\frac{1}{2}$  inch thick, usually employed for quoins. All these were bedded in pink cement. Against the walls of this chamber were traces of the quarter-round moulding forming the usual finish to floors in the better rooms of Romano-British houses. The kitchen (11) had also the same kind of floor, but composed of tiles of more varying dimensions.

The hypocaust of the winter room (7), which is of the usual composite form,

though very rudely arranged, once had its stoke-hole at the north-east corner. This, however, had been blocked and another made in the western wall, probably when the partially-demolished end (6), of the older house had been allowed to remain as an open court serving for the storage of fuel, etc.\*

One interesting fact was noted with respect to the addition to the older house, namely, that its external walls, certainly on the east, west, and partly on the north sides, showed the remains of plastering with pink cement, the first time that positive traces of extensive external plastering have been observed at Silchester. From the quantities of broken roofing tiles which covered the foundations and floors, it may be inferred that the buildings were so roofed instead of with the more common hexagonal stone slabs.

The objects found in the house had some interest. In 9, pieces of metallic residue composed chiefly of lead and copper,<sup>b</sup> were turned up, and as in chamber 1, next the roadway, there were found in the floor near the south-east corner remains of the flue of some furnace, which could not in any way be taken as forming part of a hypocaust, a conjecture may be ventured that the house was

\* The following are the measurements of the various chambers of House No. 4: 1, 14 feet 7 inches by 16 feet; 2, 4 feet 11 inches by 16 feet; 3, 9 feet 7 inches by 16 feet; 4, 13 feet 6 inches by 16 feet; 5, 6 feet by 16 feet; 6, 17 feet by 16 feet. (This is the ruined part of the older house.) 7, the winter room, 8 feet by 10 feet; 8, 12 feet 4 inches by 10 feet 3 inches; 9, 22 feet by 22 feet 3 inches; 10, 10 feet 1 inch by 11 feet; 11, 10 feet 3 inches by 8 feet 2 inches; 12, 10 feet 6 inches by 11 feet 9 inches; 13, 22 feet by 9 feet 6 inches. The vestibule attached to the western side of these chambers (from 9 to 13) was 34 feet long by 7 feet 6 inches wide. The north and east walls of the addition to the older house had an average thickness of 2 feet 3 inches, the walls of 7 and 8 were 1 foot 9 inches, and the rest, from 1 foot 5 inches to 1 foot 6 inches. The wall between 11 and 12 appears to have a thickness of 2 feet 9 inches, but in reality was only 9 inches, the other 2 feet showing the width of a dresser of masonry in chamber 11.

<sup>b</sup> We are indebted to Professor Roberts-Austen, C.B., F.R.S., for the following note on a sample of the lead found during the excavations and on this residue:

"One of the specimens was found to be metallic lead containing nearly five ounces of silver to the ton, and is probably lead obtained by the direct smelting of lead ores, and the metallic lead has probably not been desilverized.

The second specimen is of considerable interest. It is evidently a product of smelting lead and copper ores, mixed with a considerable quantity of sulphide of lead with oxide both of lead and copper. The metallic portion contains 67·64 per cent. of copper and 12·42 per cent. of lead. There is also silver, the amount of which is no less than 45·87 ounces to the ton of the material.

The mass was probably obtained by smelting complex argentiferous lead and copper ore, but it may have been the result of melting together argentiferous lead and argentiferous copper with a view to desilverize the copper. Cakes or discs of such an alloy would be placed on a sloping hearth and heated to a temperature well above the melting point of lead with a view to 'liquat' or 'sweat' out the lead from the copper, which would be left behind as a sponge. The lead would carry away the silver it originally contained, as well as any silver present in the copper.

Elaborate accounts of this process were published in the sixteenth century, but it is interesting to find indications of its use in late Roman times, and the specimens certainly point to the possession of considerable metallurgical knowledge by those who conducted the smelting operations which yielded these products."

occupied at some time by a worker in metals. From a shallow pit in 10 came fragments of wall plaster coloured red, and a very flat and singular vase of buff-coloured ware, with a small neck and handle in the centre of its upper surface.

Comparatively few rubbish pits have been found in either of the *insulae*. A well south-east of the temple in *Insula VII.* was discovered, but it fell in before it could be entirely dug out. Better fortune awaited the discovery of another in *Insula VIII.* This occurred at a point 18 feet south of the south-east corner of House No. 3, and 62 feet from the street on the west. It was 24 feet deep from the present surface, and had a wooden lining of precisely similar character to that of the well found in *Insula I.* The planking remained to a height of about 7 feet from the bottom, which apparently was also planked. The well was a square of 2 feet 6 inches. The boards of the lining were from 8 to 14 inches in width, with an average thickness of 4 inches. Either from irregular pressure of the gravel in which the well was sunk, or from rough workmanship, they did not always come exactly over each other, and so occasionally showed part of the edges of the next layer. Amongst the objects found in the well were the remains of shoes, a bronze bucket-handle, a large iron hook, probably used for raising the bucket, and fragments of the bucket itself, composed of staves of fir-wood, together with a piece of its iron hooping, and its handle of the same metal.

The south gate of the city which occupies the south-west corner of *Insula VIII.* has been fully described in our first report on Silchester.\* We will therefore pass on to examine the great building, square in plan, which, with the baths, takes up fully two-thirds of the *insula*.

It was discovered by Mr. Joyce, who excavated it in the years 1876-77, with the exception of certain foundations on its western side and its southern corridor. No complete plan appears to have been made by Mr. Joyce, but the officers of the Ordnance Survey supplied this omission and before the remains were again buried plotted all that its discoverer had revealed. Unfortunately the Ordnance plan is to a very small scale, and therefore few of the details could be shown on it which are so absolutely essential to a right understanding of a building. Pressure of other work alone has prevented a re-examination of the site, which ought to be undertaken if our task of exploration is to be made thorough and complete. Referring to the plan (*see* Plate XVII.) which is an outline enlargement from that of the Ordnance survey, with the discoveries of 1893 added in black, it will be seen that the building is one of the most extensive yet found, its courtyard rivalling in size the open area of the

\* *Archaeologia*, LII. 752.

*forum*. The external wall of its southern corridor and the southern wall of the baths to the east of it form a continuous line of nearly 370 feet parallel to and at a distance of 136 feet from the wall of the city, and the wall dividing its courtyard from that of the baths was 170 feet from the street bounding the *insula* on the east. The edifice was built round a courtyard 148 feet long by 115 feet wide, lined on its north, south, and west sides by corridors, behind each of which lay a range of chambers. On the north and south sides the ranges were of equal width; the western one was somewhat wider. Outside each range was another corridor, so that each line of chambers lay between an external and an internal corridor. On the east the courtyard was closed by a wall only. The main entrance, which was situated near the western end of the north wing, in amplitude and arrangement very much resembled the main entrance to the *forum*. Probably a road ran down to it from the street on the north of the *insula*.

The external corridor of the southern wing communicated with the baths, and at the eastern end of the internal corridor of the same wing were situated the latrines.

The whole western side had at some time been considerably altered. Originally it would seem that the external corridor lined the whole length of its chambers. A reference to the plan (Plate XVII.) will show that only a third of it now exists about the middle of that length. The northern third has been absorbed by the extension of various chambers westward, and the southern by the insertion of an apsidal room and the addition of two other rooms projecting westward from the end of the range. The southern corridor was at the same time returned northward round these latter till it met the apsidal room.

In this western division of the building occurred three chambers, one of considerable proportions, heated by hypocausts; the stairway to an upper floor; and, at the north-west corner, probably the kitchen and its dependencies. It is probable that the outbuildings on this side were stables and cart-sheds, together with those which lay in the open ground further west and south. Amongst the nearer foundations were found a fragment of lead sheeting with a nailed edge, possibly part of a cistern, and an object of iron which might have been the end of a cart pole.

The question arises, to what purpose was this extensive building devoted? Mr. Joyce conjectures it to have been a barrack for cavalry, but scarcely any of its arrangements would bear out this assignment. It should be noted that it more resembles a house of the larger class than anything else, but the regularity in the disposition of its various divisions, the way in which they appear to form sets, the

size of what may be considered its kitchen department, and the number and dimensions of the chambers heated by hypocausts, imply rather a public or quasi-public than a private destination.

It is certain that in the cities throughout Britain there must have been some provision, if not for the entertainment of ordinary travellers, certainly for that of such functionaries as business of the State might oblige to sojourn in them for a time. We might, therefore, possibly see in this building one intended for the reception of either class, a *hospitium* in fact, taking that word in the sense of a public and not a private guest house.

The nearness of the building to the great main road through the city and to one of the gates, the easy access from it to the baths, which seem as if they had been planned as an adjunct to it, its vicinity to the circular temple, perhaps the chief temple of the city, to which there must have been a considerable resort on certain festivals, all lend colour to this conjecture.

It is by no means easy to distinguish the difference between a private house and one intended for the reception of travellers. In absolutely well ascertained examples of the latter class which are to be found in Pompeii their plans are substantially the same as those of the private dwellings by which they are surrounded. Naturally a greater regularity in the disposition of the chambers, and a large supply of such as would serve as *triclinia*, must be looked for, but the particular position these buildings occupy in relation to the public edifices of the cities in which they occur (such, for example, as proximity to baths or temples or the gates), and facilities of access to them, must also be considered in any endeavour to recognise such establishments.

Those mentioned as existing in Pompeii were generally insignificant in size and accommodation, and offer few points of comparison with the important building at Silchester. To find anything analogous we must turn rather to Gaul, and to its northern and western divisions, than to Italy. One of the most important discoveries of late years in western France will, perhaps, afford an example of what we seek and throw some light upon the subject.

Excavations undertaken at Herbord, near Sanxay in Poitou, by Père de la Croix,<sup>a</sup> revealed the former existence, in the vallée de la Boissière, of a remarkable group of buildings of the Gallo-Roman period, consisting of an octagonal temple, to the outer courtyard of which was attached an establishment of baths, while in the near vicinity, on the other side of a river running through the valley, was a

<sup>a</sup> Le Père Camille de la Croix, S. J., *Mémoire Archéologique sur les découvertes d'Herbord dites de Sanxay*, 1883.



theatre. In the space of ground between the temple, the baths, and the river, lay a line of buildings which, in the opinion of Père de la Croix, were used as temporary places of sojourn, in fact as *hospitia*, at a certain period of the year when the spot was thronged by a considerable concourse of visitors, possibly assembling for political purposes, possibly as worshippers at an ancient seat of one of the divinities of Gaul.

The principal *hospitium*, if we may take it to be one, had marked similarities in its plan to the building at Silchester. Corridors surrounded a courtyard on three sides, and were backed by ranges of chambers, some of which have transverse divisions. The chambers of the principal range were of larger size than the others, and two of ample dimensions occurred at the end of each wing. It will be seen that in these dispositions there is a decided likeness to the Silchester example. The majority of the other structures (there were six or seven in all), though they varied considerably in their divisions, might be said to belong to the courtyard type of dwelling, as did the principal one.

An example of another building, which there is strong presumption was a *hospitium*, is to be found in our own country. Like the instance just cited it was associated with a temple, to which it stood in much the same relation as the guest-house did to a monastery of the middle ages.

On a hill in Lydney park in Gloucestershire, twenty miles below the city of Gloucester, and one and a-half from the western bank of the Severn, are the remains of a temple dedicated (as is known from inscriptions) to Nodens, a Celtic divinity.\* The shrine of the god stood within an enclosure formed on the south and east by walls cresting the precipitous side of the hill, on the north by a range of chambers whose back wall also crowned the slope on that side, and on the west by the *hospitium* in question. A very complete establishment of baths joined the western end of the range of chambers on the north. It formed, with the *hospitium*, by means of a connecting wall, a second and much smaller court. A reservoir, at some little distance to the east, from which the baths were supplied with water, completed the group of buildings on the top of the hill.

There is no need to describe the temple. It is clear, however, from its adjuncts, that the god Nodens must have had many worshippers on certain festival days, whilst other visitors of some importance, but in fewer numbers, coming at uncertain intervals, had to be provided with a resting place for a time, however short, and with baths for their solace.

The long line of chambers on the north of the temple court, already mentioned,

\* Rev. W. H. Bathurst, M.A., *Roman Antiquities at Lydney Park, Gloucestershire*. London, 1879.



formed part of the scheme of accommodation; some, if not all, showed the remains of good mosaic floors. Before this range of rooms ran a long corridor divided at intervals as if to constitute with the chambers various sets of apartments.

But the *hospitium* or guest-house, which bounded the temple enclosure on the east, is the building of most interest, and requires elucidation to show what points of likeness it possessed with the edifice at Silchester.

It had the usual courtyard, which measured roughly 66 feet by 63 feet, and was lined by corridors on the north, east, and south sides, backed on the north and east sides by a range of rooms. These for the most part presented no remarkable features, with the exception that some of them, especially in the eastern range, had good mosaic floors. In this eastern range, however (which would correspond with the western one of the Silchester example), it must be noted that there were three chambers important beyond the rest for their size, one at the north end, one at the south, and one in the centre. The central chamber, which had a mosaic floor and measured 24 feet by 18 feet, opened to its full width upon the corridor, having opposite to it another one of smaller dimensions also opening on the same corridor. In these two divisions may possibly be seen the principal *triclinium* and the *tablinum* of the establishment.

The southern corridor was narrower than the other two, and had a court south of it about which were various chambers.

On the west side, instead of a range of chambers, lay two long halls parallel to each other with dependencies attached intruding on the courtyard. It may be conjectured that they afforded shelter for a limited period to the poorer class of visitors to the shrine of the god on special festival days.

There is one remarkable fact to be named in connection with the building just described, viz. that none of its halls or chambers appear to have been heated by hypocausts, which would go some way to show that it was chiefly used at the milder periods of the year, and makes strongly against its being considered a private dwelling, for a house so large and in a situation so exposed would certainly have had two or more rooms thus warmed.

The baths close by were also far too important in size to have been attached to any private dwelling.

If, therefore, we bear in mind the main characteristics of the Herbord and Lydney Park buildings, and compare them with those of the extensive edifice in *Insula VIII.* at Silchester, we may fairly assume that this latter was a large *hospitium* intended for the use of those who came to the city either for public or private affairs.

It has been mentioned that the baths, which have hitherto been supposed to be the public baths of the city, were closely connected with the edifice just described. The courtyards of both were only separated by a wall, and the southern boundary of that of the baths was formed by a corridor connecting the *hospitium* (if so it may be called) with the *apodyterium* of the baths. It is true there is another entrance to the establishment from the north, but the date of this entrance is not easily ascertainable.

It is not intended here to describe these baths. They were partially explored by the Rev. John Coles in 1833, and were re-excavated by the late Mr. Joyce and his successor, Mr. Monro, the present rector of Stratfieldsaye. They have been amply elucidated by our Fellow Mr. F. G. Hilton Price in *Archaeologia*, vol. l. Two questions, however, still remained to be solved, viz. the source of the water supply, and the drainage. These matters were taken in hand in 1892 by Mr. W. H. St. John Hope, to whom was due the discovery of a curious sluice-gate through the city wall, the outfall for the drainage from the baths. The following is the account given by Mr. Hope of the work undertaken for the solution of these questions.

ON THE DRAINAGE OF THE BATHS, AND MISCELLANEOUS WORKS CARRIED  
OUT IN 1893. By W. H. ST. JOHN HOPE, M.A.

Among the works carried out during 1892 were two which have not been fully described to the Society, namely :

1. The excavation of a considerable portion of ground north of the baths ;  
and
2. A thorough examination of the system of drainage of the baths themselves.

Both these works relate to the *insula* (VIII) under notice.

It will be convenient to describe first the manner in which the baths were drained, and the interesting discoveries connected therewith.

In Mr. Hilton Price's account of the baths<sup>a</sup> is a reference to a *cloaca* or drain in the north-east corner of the large hall or *apodyterium*, numbered 5 on his plan.<sup>b</sup> (See also plate XVII.) It is described as being 14 feet 4 inches long, with a return eastward through the wall against which it is placed, and a continuation in the same direction through and under the floor of chamber 16. This drain has now been fully traced and examined.

The portion described by Mr. Price is really a main drain into which two

<sup>a</sup> *Archaeologia*, l. 277.

<sup>b</sup> *Ibid.* plate XVII.

others emptied themselves. The first of these began near the north-west corner of the cold-water bath south of chamber 7, in the floor, as a narrow pipe formed of reversed imbrex tiles. This was 3 feet 6 inches long, and, after passing under the thick division wall between the bath and chamber 7, emptied itself into a well-built brick drain, 14 inches wide. This runs in the same direction, that is northwards, for 6 feet to the second or cross drain, which is of like construction, but 18 inches in width. This cross drain begins a little to the east of the junction with the first one, and like it, with a vertical wall. There are now no remains of a subsidiary drain, but there is little doubt that one existed here from two hot-water baths in the ends of chamber 9. The cross drain is  $10\frac{1}{2}$  feet long, and runs east and west with a slight curve. At its west end it passes under the north wall of chamber 7 and opens directly into the main drain. This begins against the south wall of the *apodyterium* and traverses its entire length. Its west side is built of coursed rough stone masonry, but its eastern side, which is the base of the east wall of the hall, is of flint with regular tile courses. The drain is 61 feet 8 inches long, 18 inches wide, and 3 feet 8 inches deep, and was roofed throughout with stone slabs at about 3 feet below the floor above. The two lesser drains were probably covered in the same way, though none of the slabs remain. For the first 18 feet of its course the main drain is of the same width from top to bottom, but beyond this point, where the cross drain opens into it, there is along the rest of its eastern side a brick plinth or set-off 6 inches wide and 20 inches high, partly made of flue tiles.

At its north end the main drain turns eastwards through the wall with an opening of the same size and height as itself. From the opening the drain extended eastwards, as a channel  $13\frac{1}{2}$  inches wide, with brick sides<sup>a</sup> and bottom, for 31 feet, where it entered the building numbered 16 on Mr. Price's plan near its north-west corner. Here it turned right and left, and after traversing the north and south sides of the building, returned and passed out through two separate channels in the east wall. The inner walls of the drain, within the building, are built entirely of tiles, as are the outer walls also, but in places flint masonry occurs, perhaps insertions as repairs. On the south side the outer wall is tile at the base, but brown sandstone above, with flintwork at the east end. The inlet and outlets are entirely of tile. At a height of 2 feet 6 inches above the level of the drain is a layer of oak timbers with some traces of, apparently, two wooden drains parallel to the side walls. This woodwork is  $5\frac{1}{2}$  feet below

<sup>a</sup> These sides are now broken down to about 1 foot from the bottom.

the floor of the *apodyterium*, and was therefore probably connected with the latrines, which, of course at a higher level, the building unquestionably contained. As there are no signs of the brick drain having been covered over, the seats were most likely placed above it against the walls.

Before following the continuation of the drain a few words are necessary as to its gradients. Taking the floor of the *apodyterium* (5) as *datum*, the first or south arm of the drain at its commencement is 5 feet 4 inches below. There is a slight drop of  $1\frac{1}{2}$  inch at its junction with the cross drain, which in turn descends so rapidly as to be 6 feet below the hall floor, where it joins the main drain. The bottom of this is, on the average, 8 inches lower, but it has no fall, being actually  $2\frac{1}{2}$  inches deeper at the south end than at the north. From its return eastwards, however, it descends rapidly, and where it enters the latrine it is  $16\frac{1}{2}$  inches deeper than at the north end of the hall, which gives a fall of about 1 in 6. In the latrine the fall is very slight, not more than 1 inch in 15 feet. Looking at the great length and large cross section of the main drain, and its rapid fall from the return, Mr. Fox suggests that the waste water from the bath was periodically held back in it by a sluice-gate and then suddenly let go, so as to thoroughly flush the latrine. Although no traces of such a gate were found it is very likely that this was the case, for the two minor drains could hardly have needed so large a main drain to carry away the small amount of water they occasionally discharged into it, and it has not any other branches.

On issuing from the latrine the southern branch of the drain is bent round to join the northern branch, and thenceforward the two streams again become one. The drain then resumes its original easterly direction in a channel 15 inches wide, chiefly built of tiles, with which material it is also paved throughout. This continues for a distance of 30 feet  $7\frac{1}{2}$  inches, and then suddenly ceases. From this point the course of the drain was deflected southwards and apparently continued in wood.

Owing to the very deep cuttings necessary for pursuing the investigation, and the accumulation of water from the spring that once supplied the baths, there was great difficulty in following the course of the drain, and the destruction of most of the woodwork made it still more laborious. We found, however, part of a double row of piles or stakes, with a backing of planks, as if to keep up a bank (see plan, Plate XVII.), and beyond this, in what seems to have been a silted up pond, one of the lengths of the wooden portion of the drain. It was 9 feet long, 31 inches wide, and 9 inches thick, with a channel 13 inches wide down the centre. It was not in position, but still retained its covering plank. Beside it were other pieces of timber, part perhaps of a subsidiary drain which ran more

or less parallel with the main channel. This drain opens out of the curved end of the southern branch of the latrine at 21 inches above the bottom of it, and consists of a wooden trough 6 inches wide. It extends in an easterly direction for  $18\frac{1}{2}$  feet, and is then deflected more to the south for 46 feet, where it is broken off. Near this end are the fragments referred to.

Having ascertained the direction of the drain, the next thing was to find its outlet in the city wall.

Two or three ineffectual attempts were first made outside the wall at points to which the drains were thought to lead, to avoid the labour of deep cuttings through the mound backing the wall. It was, however, noticed that there was a break in the wall at a not unlikely spot between two of the unsuccessful points, and an examination of this led to the discovery of a very curious and interesting sluice-gate. It consisted of a passage through the wall, carefully lined with masonry, gradually widening from 4 feet 2 inches on the inside to 4 feet 6 inches on the outside. The inner opening is flanked by two massive brick piers of peculiar construction, roughly L-shaped in plan. These are partly built into the broad 2-feet set-off of the wall, where they are based upon large blocks of squared stone, and partly project 2 feet 9 inches from it. Their depth is therefore about 4 feet 9 inches. Their width against the wall is about 3 feet 3 inches, but 2 feet  $2\frac{1}{2}$  inches distant from it they suddenly narrow to 2 feet 9 inches, and then slightly taper. The widths between the three points are 3 feet 10 inches, 4 feet 10 inches, and 5 feet  $1\frac{1}{2}$  inch respectively. In the middle of the length of each pier, but not in the centre of the width, is a vertical shaft. That in the western pier is about 12 inches square, but the eastern shaft, though of the same size at the top, is suddenly narrowed a little way down on the north side to 9 inches, and so continued to the bottom. Both shafts are lined with smooth white plaster. At the base of each is an opening on the inner face of the gate, through which passed the ends of a wooden beam or sill, 7 feet long, carried across the gate and into the ends of the shafts. The shafts themselves clearly contained vertical beams tenoned into this sill, and were probably held in place by a horizontal beam joining their upper ends. From this framework hung the sluice-gate. It seems to have worked in grooved uprights, for which vertical rebates or checks are cut out in the stone blocks and made for them in the brickwork. Unfortunately none of the woodwork remained, but the dislocation of the brick shafts tells plainly of the violence used to remove the beams that were fixed in them. Extending inwards from the brick piers for nearly 13 feet, are the bases of two walls of flint and tile courses ending in square piers built of tiles. That on the west side is 1 foot 8 inches thick, the other is a little thinner.





SILCHESTER.—REMAINS OF A BLOCKED SLUICE GATE IN THE CITY WALL.

*From a photograph by A. G. Browning, Esq., F.S.A.*





Against the piers they are 6 feet apart, but slightly diverge towards the opposite ends. They are obviously the remains of retaining walls carried through the bank which backs the city wall, but a curious series of somewhat irregularly-spaced sockets behind them shows that they were built against two rows of vertical posts backed by planking, which served the same purpose. A similar feature has already been mentioned as occurring in the side of the drain. There were seven posts on each side, but they varied considerably in size, those on the east side being about 10 inches wide, while the others were only 7 inches wide, with bigger posts at each end. The walls were probably built against the older timber-work to prevent this being undermined or decayed by the water that ran between. Between and beyond the ends of the walls were traces of a bed or pavement of the pink waterproof cement.

The lower end of the water channel was narrowed between the piers by converging flint walls to a narrow outlet faced with tiles and only 10 inches wide. This probably sufficed for the ordinary drainage, as it was below the sill of the sluice-gate, which we may therefore suppose was only raised when an accumulation of water required it.

One curious point about the gate is that at some late period in the city's existence, it was completely walled up with layers of concrete and tiles, and the outlet of the water blocked. This was, no doubt, done for greater security in troublous times, but how the escape of the water which must have risen there was provided for it is not easy to see, as there is no other opening in the wall. What actually happened appears to have been this, that the water formed a pool or boggy marsh behind the gate, for, as has already been noticed, the detached pieces of the wooden drains were embedded in a deep layer of silt, which also yielded amongst other animal remains an almost complete skull of a young ox.

The general appearance of the sluice-gate as excavated, from within the city, is well shown in Plate XX. from an excellent photograph by our Fellow Mr. A. G. Browning, who has kindly allowed it to be reproduced.

The city wall at the sluice-gate is 9 feet 8 inches thick at the base, and has a chamfered plinth of brown sandstone. The external cuttings made to find the outlet of the drains revealed the interesting fact, that the ground upon which this part of the wall is built is studded with wooden piles, which extend under as well as in front of the wall. This was probably thought necessary on account of the marshy character of the ground at this spot through the escape in this direction of a spring, which was subsequently utilised for the baths and so brought under control. This spring rises just outside the north-west angle of chamber 3 of

Mr. Price's plan, and on the north side of the square chamber with thick walls numbered 4. There can be no doubt that this was a conduit or cold-water tank for supplying the baths fed by the spring when it was more powerful than now. The overflow of the spring ran straight across the north end of room 3, through openings in the side walls, and then returned southwards towards the main drain, into it which emptied itself.

The ground immediately to the north of the baths was carefully trenched in the spring of 1892, but, except a few rubbish pits and a number of vessels and fragments of pottery, it yielded no other remains or signs of buildings. The open court or area west of the baths was also trenched, with the same result. At a distance of 338 feet north of the southern wall of the baths the foundations of a wall running east and west were met with, with a branch at its east end. Beyond this the wall again resumed its course, and also returned at right angles northwards. At 55 feet along this return there occurred the foundations of a chamber about 11 feet square, just inside the limit of our excavation.

The wall running east and west was subsequently found to be the southern boundary of an unexcavated *insula*, east of *Insula VII.* The street of which it formed the northern limit had no wall on its south edge, and it is uncertain what was its width. It was a continuation of the street south of *Insula VII.* The wall traced northwards as far as the square chamber formed the east side of a hitherto unnoted street, extending from the north to the south wall of the city. This street constitutes the eastern boundary of *Insula VIII.*, but it is here not bounded by walls, and could only be traced by its gravel roadway. The northern half of it was plainly revealed last summer by the drought as a broad brown band in the clover, so clearly defined as to enable its line to be laid down on the plan.

The ground reserved for excavation having been worked through sooner before harvest than was anticipated, it was decided to utilise the time at our disposal in examining a piece of ground in the northern half of the city which had just been cleared. This area lay immediately to the west of *Insula I.*, and formed about three-fifths of a new *insula*, which has been numbered IX. It is traversed by the modern highway which crosses the site. The excavations revealed the foundations of a large house of the corridor type, most irregularly placed in the northern part of the *insula*, and of two or three other buildings. The description of these buildings, and the remains found with them, will more properly come in with that of the whole *insula*, when we have completed the excavation of it during the forthcoming season. An exception, however, may be made in the case of one

object discovered, from the extreme importance attaching to it and its unique character.

In one of the corridors of the obliquely-placed house already mentioned a well was found, which from its being on the line of a destroyed part of the outer wall of the corridor would seem to have been sunk after the house had fallen into ruin. At a depth of nine feet from the present level there was found in the well the greater part of a sand-stone pillar or *stele* with moulded base. On this being washed there appeared on one side a curious series of markings not unlike the characters of an Ogam inscription. The stone being extremely decayed and friable and in danger of suffering injury if kept at Silchester, was at once put into a case, under the direction of our Fellow Mr. Herbert Jones, who was then in charge of the excavations, and sent up to London. Here it was examined by several experts, including Professor Rhys, who at once pronounced the markings to be an inscription written in the Ogam character. The stone is now  $23\frac{1}{2}$  inches high. It consists of a plinth 4 inches high and originally about 14 inches square, upon which is a circular base  $4\frac{1}{2}$  inches deep with characteristic late-Roman mouldings. From this rises the pillar proper, which is somewhat in the shape of a fir-cone, with a lower portion 4 inches high gradually widening out from 8 inches to  $10\frac{1}{2}$  inches in diameter, and then contracting towards the top, where it is broken off to 7 inches. On one side of the upper part are cut two broad and shallow parallel vertical grooves, beside which are the two lines of inscription.

Concerning the stone and its inscription, Mr. John Rhys, Professor of Celtic in the University of Oxford, has most kindly communicated the following remarks:


I examined the Silchester Ogam monument at Burlington House on the 8th of August last. The material consists of highly perishable sandstone, rudely carved into what seems to me a phallic form, but the upper part of the stone is gone. What remains may be roughly described as the frustum of a cone, below which the stone narrows greatly, and then widens out into a moulded base. It will be seen from the engraving that the inscription consists of two lines



Fig. 1. Stone with Ogam inscription found in  
*Ineula IX.*  $\frac{1}{2}$  linear.

of Ogam, beginning at the greatest circumference of the frustum, and reading upwards into the broken top of the stone. The first line reads, as it now stands, thus :

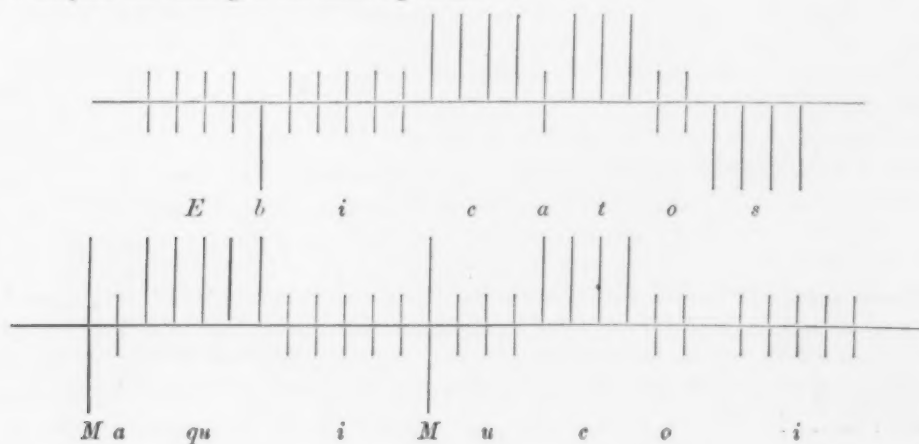


Below this, and situated near the neck of the stone, are certain depressions, which at first sight seemed to me to form ; but, on scrutinising them, I found that only the first of them was cut or scratched at all, and that not in the same way as the rest of the Ogam. I conclude accordingly that it is due to accident; and it is further to be urged against this and the other depressions that they could only be at best about one-half the length of the other consonants of the group with which they would have to be ranged, that is to say, in case they proved to be writing at all. The legend here given ends with the first digit of a group on the right, the rest is gone.

The next line begins at a spot where a considerable patch of the frustum at its greatest circumference has been broken off by some accident or other. The line ends also in the breakage at the top of the stone; but what remains reads as follows :



In spite of the breakages, the formula of the epitaph and one proper name are fairly certain; and I complete the reading to the following extent :



The first line may have consisted of the name *Ebicatos* alone: it may have been followed by *maqui* with a parent's name, or else *Ebicatos* may have had an epithet. The second line must have included a proper name following *mucoi*, but we have no means of discovering it, so let us represent it as *x*. The whole will then read in its shortest possible form somewhat as follows: "(The Grave) of Ebicatus son of Muco *x*," which means "Descendant of *x*." Muco *x* may accordingly be treated as the name of the clan or family: in other words every member could describe himself as *Muco x* or Descendant of *x*. In a few Latin inscriptions, *Muco* is rendered by *nepus* (for *nepos*) and *pronepus*, as in *Carataci Nepus* (Exmoor), *Nepus Barrovadi* (Whithorn), *Pronepus Eternali Vedomari* (Glamorgan), and *Nepos Vepogeni<sup>a</sup> Caledo* (the Colchester tablet).

A word now as to the proper name *Ebicatos*: it is the genitive of *Ebicatus*, a compound to be analysed *Ebi-catus*. In the first place, it is to be remarked that the thematic vowel, in this instance *i*, appears to have been obscurely pronounced. When Goidelic names are given in Latin, the thematic vowel is written *o*, but in Ogam *a*, as in CVNOTAMI, in Ogam *Cunatami*: compare SENOMAGLI and SENEMAGLI, also such names as EVOLENGI and Gaulish *Evotalis*, where the element *evo* is the Gallo-Brythonic form of what we have as *ebi* in the *Ebicatos* of the Silchester Ogam. Thus, judging from Ogams found in Wales and Ireland, one would have expected *Ebacatos* rather than *Ebicatos*. In the next place this equation, as it will have been seen, makes *b* stand for *v*—a fact due, no doubt, to a touch of the influence of late Latin, where *b* had the two values of *b* and *v*. This is not the only instance of the kind known to me in early Ogam. Lest, however, it should be thought that I am merely constructing a chain of frivolous conjectures, let me say that the name in question is already known to me as a genitive *Ivacattos*, namely, on one of the stones at Killeen Cormac, in county Kildare. I was there in the year 1883, and I thought the reading was *Ivacattos*, though *Evacattos* would be the form which I should have expected. But I was not without doubt as to the *i*, and I copied the whole as follows: *Ovanos avi Ivacattos*.

u                      e

In this instance there is an accompanying legend in Latin, which seems to me to read IVVENE DRVVIDES, where nothing can be clearer than that IVVENE is to be somehow equated with *Ovanos*. With this and other matters of the same kind, which I cannot discuss in this note, I hope to deal with in detail in a volume on *the Celts and Pre-Celts of the British Isles*. These conjectures might, perhaps, be more comprehensively put thus: if the name *Ebicatos* occurred in the Latin portion of a bilingual inscription it might be expected written *Ebocati*.

<sup>a</sup> I wish to modify what I said in a former letter (*Proceedings S.A.L.*, 2nd S. xiv. 183) about *Vepogeni*, as I have since come back to the view that it is Celtic. What has happened to it is that the Picts, adopting the name, sooner or later came to treat the *en* of *Vepogen* as their own genitive termination, so that they next inferred *Vepog*, the *Vipoig* of the list of Pictish kings. The association of this *Caledo* with the Campsie Fells is countenanced by Skene, so locating a Caledonian wood as to take the forests of Selkirk and Ettrick in. Lastly it may be worth while considering whether most of the ancient references to *Caledonii*, *Caledonii Britanni*, and *Silva Caledonia* prior to Agricola's campaigns were not made to the same comparatively southern region. See Skene's *Celtic Scotland*, i. 40-2.



or *Evocati*. This is, however, to venture on dangerous ground, as I shall probably hear something about a Latin *Evocatus*, though the name is really a Celtic compound, *Ebi-catus* or *Evo-catus*, involving the Celtic word for battle, namely, *catu-*, which occurs often enough in proper names. The other element *ebi* or *evo* is of uncertain meaning, but it possibly meant an arrow or javelin. The whole name in that case may have meant one who fights with arrows or with a javelin.

To return to the Silchester stone, I abstain from explaining how the finding of an Ogam so far east as that spot lends itself to the support of theories to which I have from time to time committed myself; but I may be allowed to remark that the form of the writing raises several interesting questions. Among other things, it is to be noticed that the scores, though not drawn on a very large scale, are deeply cut, and that as the stone in its curved form offered no angle the writer drew two grooves on it, and cut his two lines of digits in connection with them. This has never before been found in the case of an Ogam dating, let us say approximately, before the eighth or ninth century. On the other hand, the fact of the *m* being represented by a long score perpendicular to the groove, and not by an oblique one, is probably to be regarded as a mark of antiquity. The vowels consist of short lines drawn perpendicularly across the groove; but the spacing of them is irregular, which suggests to me that the writer was so used to carving Ogams that he had become careless. It is needless to add that antiquities discovered at places like Bath, Caerleon or Caerwent, and even Chester, should be carefully searched for traces of Ogam writing.

Lastly, as the stone was discovered 9 feet deep in a pit, in the corridor of a house in the heart of the ancient city, which I suppose we may identify with Calleva of the Atrebates, the question presents itself as to the purpose intended to be served by the inscription: was it an epitaph, and if so, how came it to be where it was found? It has been suggested to me that it was not sepulchral at all, but put up in front of the owner's house. I give this conjecture for what it is worth, and I take the liberty of adding a reference to Irish literature, which might serve to illustrate such a custom. In the story of the *Táin*, in the book of the Dun Cow, written before the year 1106, the great Irish hero Cúchulainn is described (folio 62) driving forth in the war-chariot of his lord, Conchobar Mac Nessa, king of Ulster, in quest of adventure. After careering over the country for some time he bids the charioteer drive to the abode of the Sons of Nechtan Scene, the recognised foes of the Ultonians. Much against his will the charioteer does so, and unharnesses his horses, while Cúchulainn takes the ring off the pillar-stone and throws it into the stream that flowed hard by. Then he lays him down by the stone to rest, after giving orders to his charioteer to wake him in case the enemy made his appearance in force. In the sequel, the Three Sons of Nechtan Scene fight with Cúchulainn and are slain by him. But what I wish to call your attention to is this: the standing-stone is introduced as a familiar object requiring no word of explanation, and so is the ring, wreath, or withy with which it was adorned. The narrator, however, thought it worth his while to explain that it betokened misfortune to the inhabitants of the *dún* if the ring was left in the river to be carried away by its current, for it appears that it did not consist of metal of any kind. The act of throwing the ring away is described by him as constituting a case of *coll n-gisse*, or violation of taboo, which was

believed in ancient Erinn to be followed by unfailing disaster, as in the instance mentioned. I may add that the word used for the stone in the above story is *corthē*, which is derived from the verb *cuirim*, "I set or place;" it meant originally therefore a thing which is set, placed, or fixed.

It may be noted that hitherto no stone bearing an Ogam inscription has been found east of the river Severn and the counties of Devon and Cornwall. The occurrence, therefore, of an undoubted example at Silchester is a matter of the highest interest.

In the angle of the city by the east gate is an area about 200 feet square now used as a rickyard. Owing to the failure of the hay harvest this remained almost empty for some months, and by the kind permission of the tenant, Mr. T. W. Lush, we were able to trench it. It was found to be entirely open ground, but on two sides it must not be overlooked that the area is encroached upon by the bank behind the city wall, and a broad strip lining the bank may be a street, as has already been suggested in our description of *Insula VIII.* On the west side, close to the angle of the farm buildings, a wall was found running in a north-easterly direction for 88 feet 10½ inches. Here it returned north-westwards at a right angle, but could not be followed up owing to its passing beneath growing crops. It was 18 inches thick, and had a gap or opening 9 feet 3 inches wide near its southern end.

At a distance of about 142 feet west of the north-east angle of the city was a postern gate opening towards the amphitheatre. This was partially examined in 1865 by Mr. Joyce,\* who gives its width as 11 feet 6 inches. Last summer it was completely uncovered. The outer half in which the archway was set had been entirely destroyed and removed, but the side walls of the passage through the wall remained, to a length of 4 feet 6 inches on the west, and 6 feet 2½ inches on the east, where it was also 3 feet high. The inner quoins were built of ashlar slabs, but that on the west side had been torn out. The passage had a floor of rough blocks of stone, which were probably covered with gravel, and was 10 feet 10½ inches wide. This is also the width of the north and south gates.

The only other fact to be chronicled is the discovery of the angle of a building, with walls 2 feet thick, in the farmyard, about 240 feet due west of the southern angle of the east gate, and a little to the north of the two square temples. It abutted on the street running from the east gate to the *forum*.

As usual, many small objects of various kinds in bronze, iron, and bone were turned up during the excavations, and a very fair number of whole or nearly

\* *Archæologia*, xl. 416.

perfect earthenware vessels were recovered. In *Insula* VII., amongst other things, was found part of a tile on which had been sketched, while the clay was soft, a rude figure of a native ox, possibly a unique portrait of a *Bos longifrons*! Out of the loose rubbish in house No. 1, *Insula* VIII., was picked up part of another tile with an inscription scratched upon it. Unfortunately only a few letters remain. The architectural fragments found have already been noticed.

From the same pit in *Insula* IX. which yielded the Ogam inscription there came from immediately under the stone, the weight of which has crushed it, a lead or pewter jug. In the same *insula* were found a capital and base of good character, and a large and perfect slab of Purbeck marble. The description of these must, however, be deferred until our next report.

The animal remains found in 1893 call for no special remark.

The accompanying block-plan shows what progress has been made in the exploration of the city up to the present time.

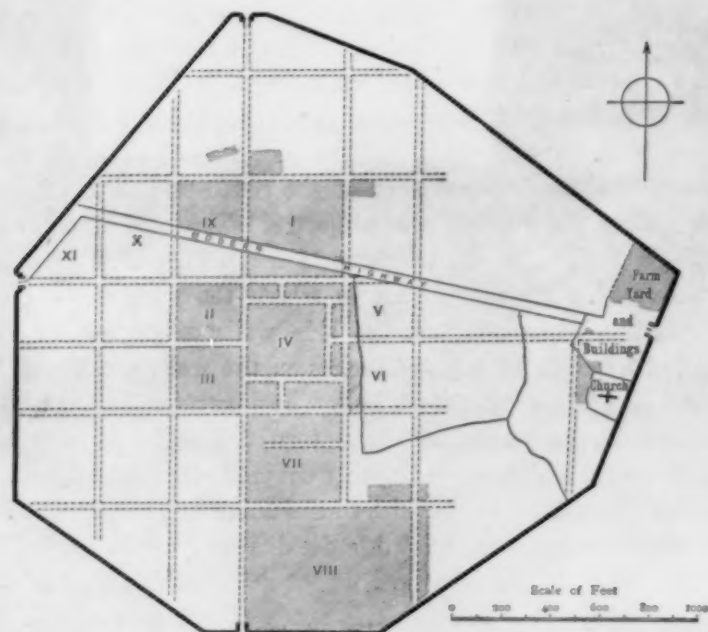


Fig. 2. Block-plan of Silchester, showing portions already excavated up to October, 1893.

Rec<sup>d</sup>. 4/July/94



ARCHAEOLOGIA :

OR

MISCELLANEOUS TRACTS

RELATING TO

ANTIQUITY.





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<sup>a</sup> The Society is indebted to the Henry Bradshaw Society for the loan of this illustration.

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<sup>a</sup> The Society is indebted to Mr. Murray for the loan of these illustrations.



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<sup>a</sup> The Society is indebted to the Rev. E. S. Dewick, M.A., F.S.A., for these illustrations.

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<sup>b</sup> The Society is indebted to Thomas Brooke, Esq., F.S.A., for these illustrations.

<sup>c</sup> The Society is indebted to the Rev. E. S. Dewick, M.A., F.S.A., for these illustrations.



XIII.—*Some Notarial Marks in the "Common Paper" of the Scriveners' Company.*  
*By EDWIN FRESHFIELD, Esq., LL.D., Treasurer.*

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Read June 2, 1892.

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THE main object of this paper is to exhibit to the Fellows a collection of the Notarial Marks used by the notarial members of the Scriveners' Company of London.

These marks are preserved in a book called the "Common Paper" of the Scriveners' Company, which is in fact the register of members of the Company from the year 1390 to the year 1628.

It is not the intention of this paper to describe in detail the many interesting features of this book; it will be sufficient for the present purpose to give a general description of it.

It is a folio volume of 298 pages, on paper, in a limp brown leather cover.

The book contains some old ordinances applicable to the Companies of the City of London in general, and also some applicable to the Scriveners, or Scriveners of the Court Letter, as they are called, in particular.

The object of the compilers of the Common Paper was to draw up, in the shape of a book, a document containing the whole of the ordinances forming the constitution of the Company, which each member as he was admitted might swear that he would obey, and subscribe his name to his oath. The ordinances, which are partly in Latin, partly in French, and some portion in English, consist, first, of an extract from the General Law of the City, applicable to all fellowships constituted by the Mayor and Aldermen; in the second place of the particular ordinances of the Scriveners' Company which had been submitted to and approved by the City. There are some other particulars relating to the Company, but by far the larger part of the book is taken up by the register, and relative subscriptions made by the members on admission. Each of these subscriptions is in the handwriting of the person admitted to the Company, and the whole together form a complete and valuable register of the members of the Company between these periods. The subscriptions are all in Latin, and each member seems, up to a certain time, to have compiled his own form of

subscription. At first they merely state the fact of the oath and subscription, but some of the later subscriptions give particulars of the place of birth and parentage of the subscriber, the name of the person to whom he was apprenticed, with occasionally other information and the date. Each subscription is signed in the margin by the person admitted.

It is fortunate that in some few cases the persons subscribing, being also notaries, have registered their notarial marks, and after a certain date almost every subscriber registers his rubric.

From the very few notarial marks registered it is clear that it was not compulsory to do this, and in many instances a person described as a notary in his subscription registers no mark.

The few that there are, however, form a very interesting collection, extending from the reign of Richard II. to the latter end of Queen Elizabeth's reign. The marks partake more or less of the nature of crosses, and moreover seem in many instances to have been drawn upon some general plan, though with many variations.

The rubrics on the contrary are exceedingly various. I do not think that all the members registering rubrics were notaries, though I think it probable that a large proportion of the Scriveners' Company consisted of notaries.

The notaries occupied a double position. On the one hand, they were public officers having a fixed international position recognised by the Civil Law, and holding an authority from the Emperor and Pope, but not in any way recognised by the Common Law of England. On the other hand, they and the Scriveners discharged all the functions now performed by conveyancing counsel and solicitors in the drawing of deeds and instruments in England.

No one could draw a deed, will, or charter in the City of London who was not himself a freeman and liveryman of a Company.

One of the great objects of the Scriveners' Company was to confine the drawing of these deeds to members of their own Company, in order that they might keep a supervision over them and prevent frauds. This they at last accomplished, but at the commencement of this book it is, I think, clear that scriveners could be members of other Companies. Every scrivener or notary had to sign his name at the foot of every deed prepared by him, as a voucher for his work, and I have no doubt that the rubrics were also used for the purposes of identification.

It seems to me, then, that the larger marks were used by the notaries when discharging their functions in accordance with the requirements of international or civil law, the rubrics when they were doing some act required only for use in England.

For example, a notary drawing up an Act of Protest relating to a foreign bill

would use his large mark, and probably also if the protest related to some marine question.

If he were drawing up a charter, conveyance, or such like document, he would use his rubric.

I am now speaking only of notaries in the City of London.

There were other notaries in England attached to the ecclesiastics, equally holding their authority from the Pope and Emperor, but unless these were members of the Scriveners' Company they could discharge no function in the City.

The book appears to have been commenced in the year 1390, the fourteenth year of Richard II. There is a document\* in that year stating that Martin Seman and John Cossier, masters of the mystery of Scriveners of the Court Hand in the City of London, were presented by the Company as having been by them chosen to be the masters of their mystery for the year then ensuing.

These two persons are the two first who subscribe to the ordinances.

The first subscription is that of John Cossier.<sup>b</sup> His subscription begins "Ego vero Johannes Cossier Civis et Scriptor Litere Curialis Londoni." I think it is clear, from the manner of commencing this subscription, that he was the first free scrivener who had subscribed to the book, because afterwards each of the scriveners, down to the year 1626, commences his subscription "Et ego."

John Cossier puts his notarial mark in the margin (fig. 1) and signs himself "Notarius Papalis et Imperialis."

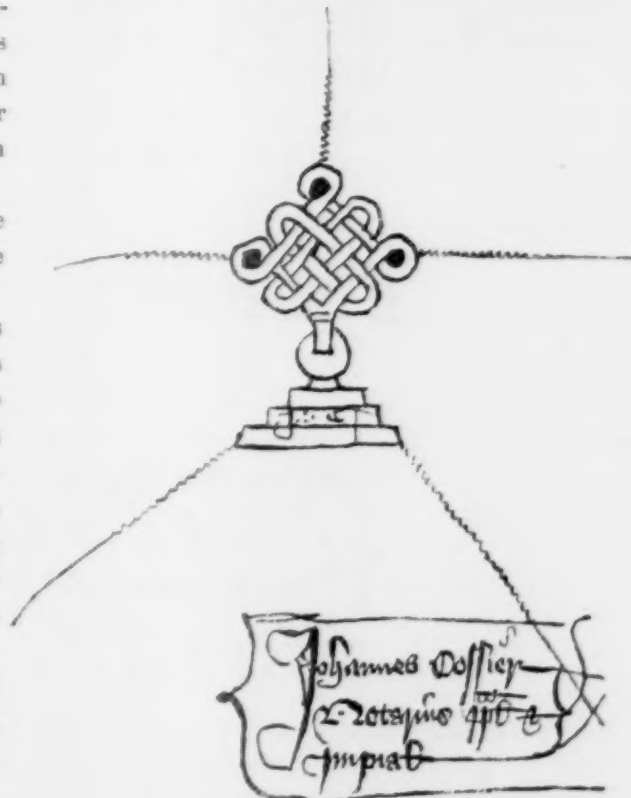


Fig. 1. Notarial Mark of John Cossier, 1390.

\* Page 4. This and the subsequent references relate to the MS.

<sup>b</sup> Page 53.



The second is that of Martin Seman, 1390.<sup>a</sup> He also adds his mark in the margin (fig. 2), and describes himself also as a papal and imperial notary.

Both these marks are in the nature of a cross. Martin Seman puts the initial of his christian name and the whole of his surname in the foot.

The next mark,<sup>b</sup> that of John Cloune (fig. 3), is a very beautiful one. It is also in the nature of a cross, and contains his initials in the middle. He, too, describes himself as a papal and imperial notary.

Several of the subscriptions at this period are written in ornamental hand-writing, and suggest that the scribes were also illuminators.

The next is that<sup>c</sup> of John Bydeford, a very beautiful cross with his name in the foot (fig. 4). He, too, signs his name and describes himself as a papal and imperial notary.

The next is that of John Chesham.<sup>d</sup> In this mark the cross form is so varied as to be almost lost sight of (fig. 5). John Chesham signs his name in the foot, and describes himself as an imperial notary. If he were also a papal notary this is omitted. This entry is important, as it is the first to give the date. John Chesham wrote

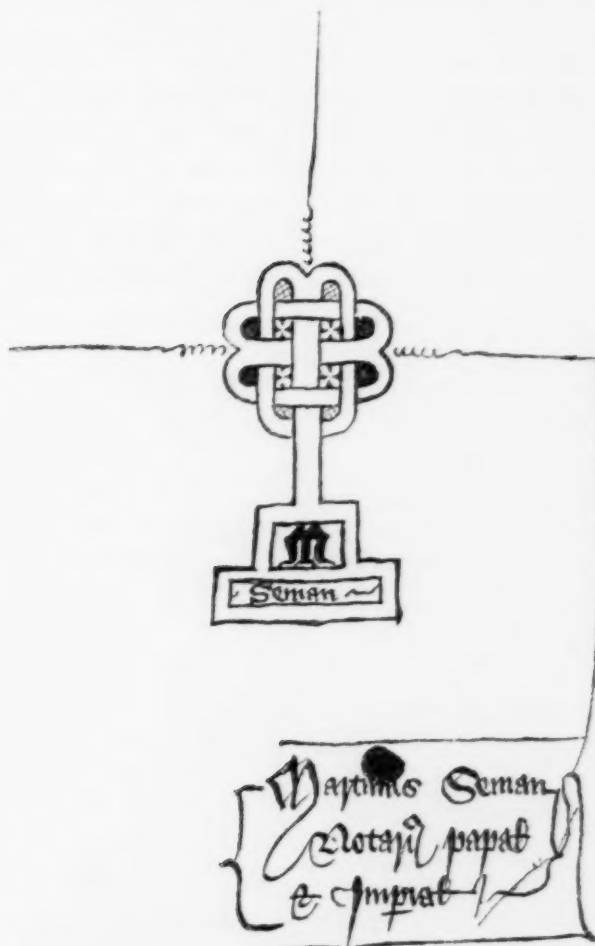


Fig. 2. Notarial Mark of Martin Seman, 1390.

<sup>a</sup> Page 53.

<sup>b</sup> Page 55.

<sup>c</sup> Page 61.

<sup>d</sup> Page 64.

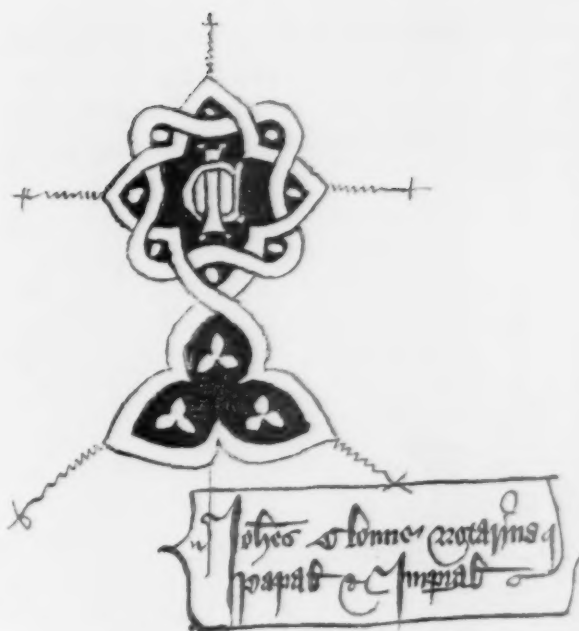
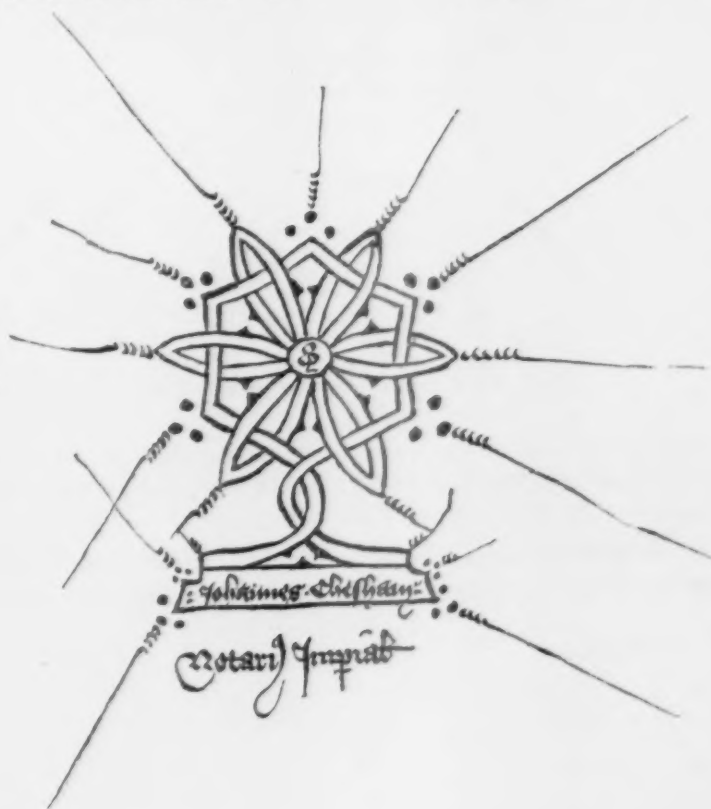


Fig. 3. Notarial Mark of John Cloune, 1390.



Fig. 4. Notarial Mark of John Bydeford, 1390.

Fig. 5.  
Notarial  
Mark of  
John  
Chesham,  
1417.



his subscription on the fourteenth day of June, in the fifth year of King Henry V. So that the intervening marks are between the year 1390 and 1417.

The next mark<sup>a</sup> is that of Walter Culpet. This is also a beautiful mark (fig. 6), though here also the cross is almost lost. The initial W is in the centre,

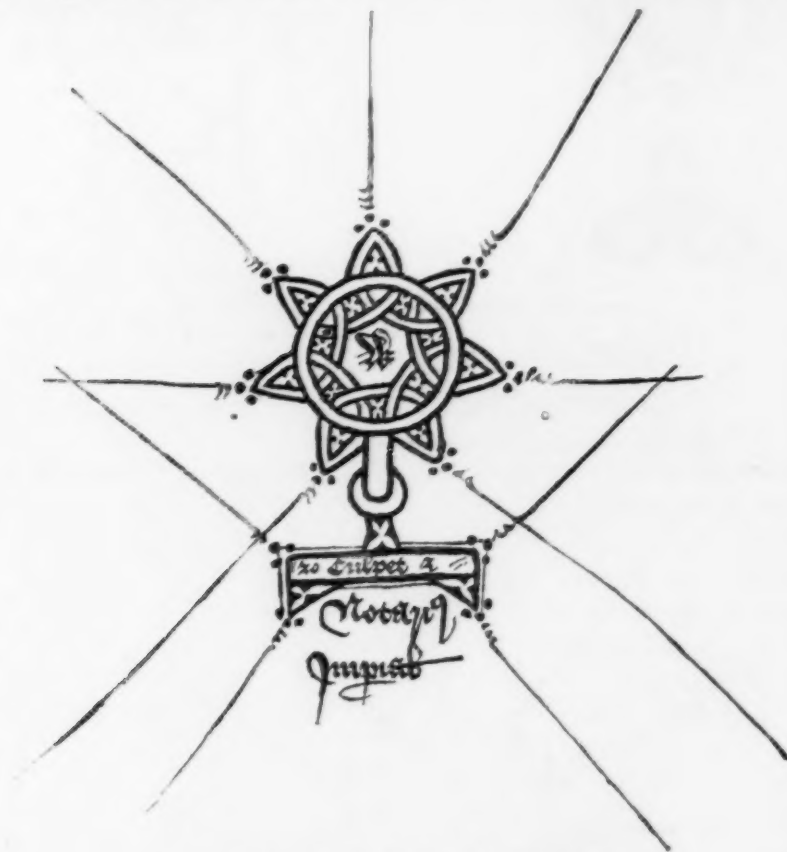


Fig. 6. Notarial Mark of Walter Culpet, 1423.

the name Culpet is written in the foot. The subscription is dated the 20th of July, in the first year of King Henry VI. (1423). W. Culpet signs himself as an imperial notary.

The next is that of John Daunt.<sup>b</sup> His full name is in the foot of the cross, the centre of which is occupied by the letter D (fig. 7). This subscrip-

<sup>a</sup> Page 66.

<sup>b</sup> Page 66.

tion is dated on the 15th day of October, 1440. Daunt describes himself as an imperial notary.

In the earlier part of the book<sup>a</sup> there is a minute containing ordinances made on the 28th April, in the twenty-eighth year of King Henry VI. (1450), John Grove and Robert Dale being wardens. These ordinances prescribed some

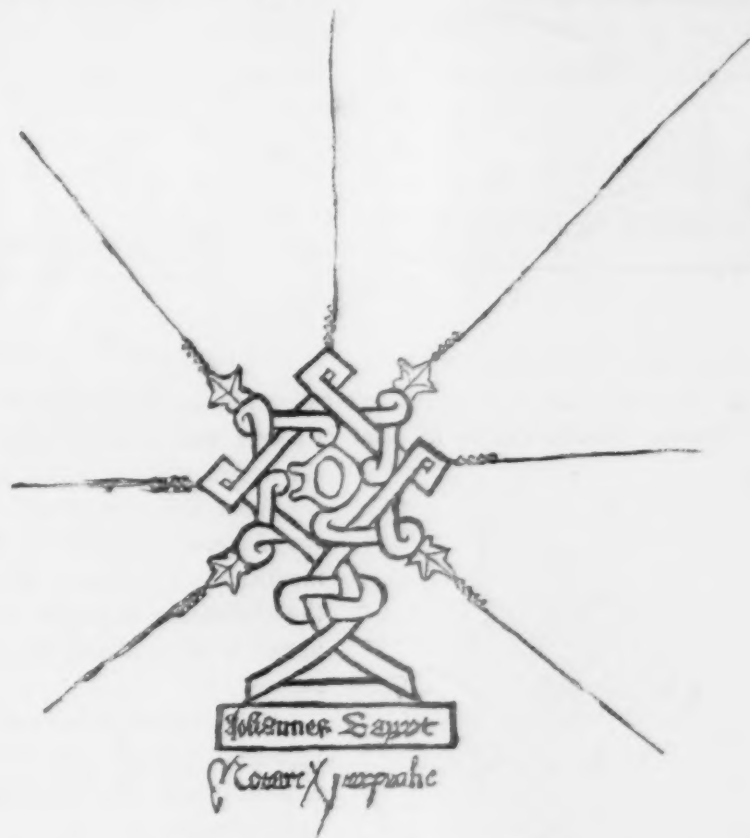


Fig. 7. Notarial Mark of John Daunt, 1440.

alteration in the hood of the craft, and that the mass of the Holy Ghost should be said yearly on the Sunday next after Midsummer day at St. Paul's, if it might be had, or else at another place convenient. The mass was to be followed by a dinner, which was to be held on the same day.

<sup>a</sup> Page 15.

These ordinances are subscribed by eighteen members, commencing with John Grove and Robert Dale. They all agreed to observe what had been written,

Fig. 8.  
Notarial Rubric of Thomas Plummer, 1440.

Fig. 10.  
Notarial Rubric of John Forster, 1491.

Fig. 9. Notarial Rubric of John Thorp, 1446-7.

Fig. 11.  
Notarial Rubric of John Wylford, 1505.

but one of them, Thomas Frodsham, took exception to the colour of the hoodings, "I Thomas ffroddesh<sup>m</sup> to all that is above written except the colour of the hodynge, I consent & aggree."

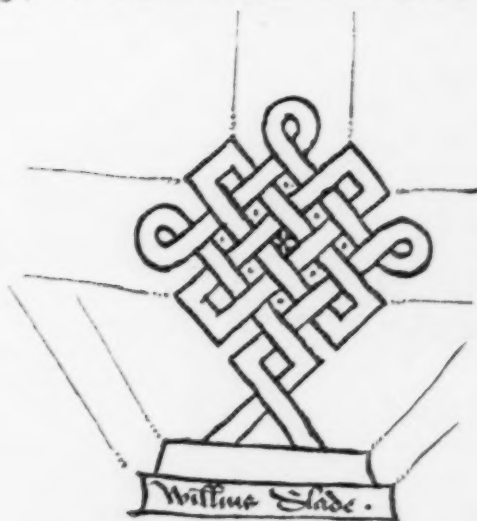


Fig. 12. Notarial Mark of William Slade, 1465.

From this one would infer that the fraternity consisted of eighteen members. It is about this time that the Scriveners began to add to their names a mark which I have called a rubric.

It is generally a sort of interlacing figure made with a pen, and this practice continued from this time well into the last century.

The four rubrics here given (figs. 8-11) of Thomas Plummer (1440), John Thorp (1446-7), John Forster (1491), and John Wylford (1505), are excellent typical examples.

Thomas Frodsham, who objected to the colour of the hood, is among the earliest of those who have well-marked rubrics.<sup>a</sup>

<sup>a</sup> Page 70.

One or two scriveners at this time illuminate their subscriptions very prettily. This especially is seen<sup>a</sup> in the case of two, Richard Humphry and John Thorp, both in the twenty-fifth year of King Henry VI. (1447).

Year by year the rubrics became more general and more important, and hardly one of the subscriptions is without one.

The next notarial mark is that of William Slade.<sup>b</sup> This mark (fig. 12) can hardly be called a cross, but I am sure it is the principle underlying it. On the foot is Slade's name. This subscription is dated 30th July, in the fifth year of King Edward IV. (1465). Besides signing his name on the opposite margin to the mark, William Slade has an elaborate rubric (fig. 13), so that he used both a

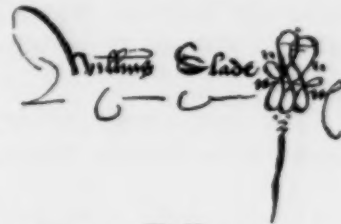


Fig. 13.  
Notarial Rubric of William Slade, 1465.

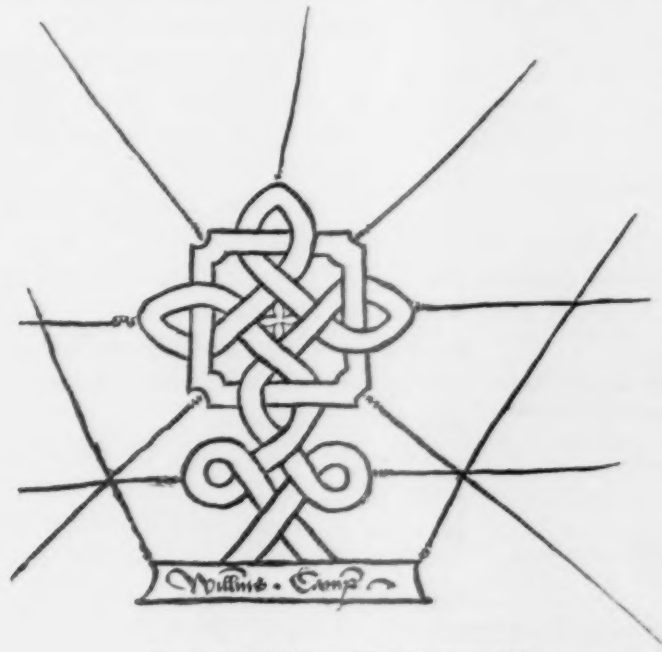


Fig. 14. Notarial Mark of William Camp, 1475.

notarial mark and a rubric. He is not described as a notary, though he was certainly one.

<sup>a</sup> Page 72.

<sup>b</sup> Page 77.



If I am right in my view the mark would be for use in all documents relating to the Canon Law or Civil Law, and the rubric for ordinary purposes.

The next mark (fig. 14) is that of William Camp.<sup>a</sup> His admission is dated the 20th of September, in the fifteenth year of King Edward IV. (1475). William Camp signs his name in the foot of his mark, but has no rubric.

The next mark<sup>b</sup> is that of John Manee (fig. 15), who subscribed on the same day as William Camp, and who also subscribed his name in the foot of his mark. He, too, has no rubric. Both these marks are on the principle of a cross with a foot, but the latter is a very poor affair, both in design and execution.



Fig. 15. Notarial Mark of John Manee, 1475.

Hugo Standish, who subscribed his name on the 27th August, 1477, has a very pronounced rubric.<sup>c</sup>

In the year 1490 Thomas Butside, who is described as a citizen and goldsmith of the City of London, and secondary of the Bread Street counter, was admitted a scrivener in Lombard Street, of the City of London, in the tavern called "Le Cardynalls Hatte."<sup>d</sup> He is described as *in sciencia sufficienter eruditus*, but it is impossible, from the wording of his subscription, that he could have written it, though he subscribes his name in the margin in a very indifferent hand. He has no rubric, and his admission appears to have been only complimentary.

*Richard Moundis*



Fig. 16.  
Notarial Mark of Richard Moundis,  
1518.

Mr. Robert Cressy, in the eleventh year of King Henry VII., describes himself as unworthy (*quamvis indignus*), but his writing is very good.<sup>e</sup>

One admission, that of Richard Moundis,<sup>f</sup> in the ninth year of King Henry VIII., has opposite to it something very like a merchant's or mason's mark (fig. 16).

About five years later several of the subscriptions are without a rubric, and

<sup>a</sup> Page 80.

<sup>b</sup> Page 81.

<sup>c</sup> Page 81.

<sup>d</sup> Page 85.

<sup>e</sup> Page 90.

<sup>f</sup> Page 98.

it is remarkable that three of these are those of papal notaries. In the seventeenth year of Henry VIII., Henry Standyssh,<sup>a</sup> also a papal notary, adds a rubric to his name, but has no mark. His is the last entry of a papal notary.

Thomas Wytton, admitted on the 30th January, 1541-2, and Christopher Dowe, admitted in the following month, have elaborate rubrics (figs. 17 and 18).<sup>b</sup>

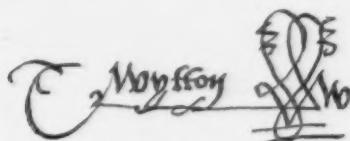


Fig. 17.  
Notarial Rubric of Thomas Wytton,  
1541-2.

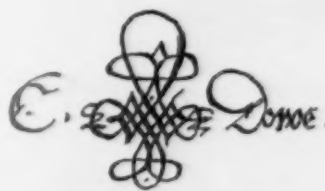


Fig. 18.  
Notarial Rubric of Christopher Dowe,  
1541-2.

I am interested in Thomas Wytton; he was a tenant of St. Christopher-le-Stocks, and lived in the parish of St. Dunstan-in-the-West, at the corner of Fetter Lane.

The next mark, after a long interval, is that of George Kewall,<sup>c</sup> who was admitted on the 30th June in the year 1559, in which month a large number of scriveners were admitted.

George Kewall has a poor mark (fig. 19). It is not unlike Manee's. He signs his name in the margin of the submission, and also in the foot of the mark, and describes himself as *Notarius publicus*, and he has a motto, *Laus soli Deo*, the first one registered in the book. In addition to his mark he has a large rubric, which is registered by the side of his mark.

He also gives the names of the scriveners to whom he was apprenticed.

After this date the rubrics become very elaborate. Those of Richard Thomson (fig. 20) and

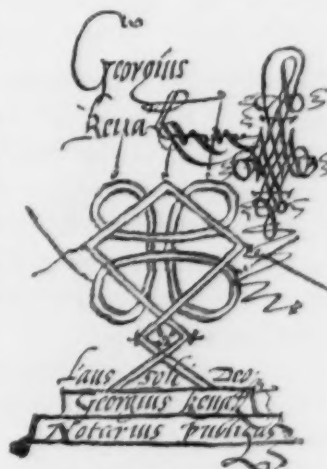


Fig. 19. Notarial Mark and Rubric of  
George Kewall, 1559.

<sup>a</sup> Page 100.

<sup>b</sup> Pages 106-7.  
2 L 2

<sup>c</sup> Page 117.

Stephen Playne (fig. 21) in 1564,<sup>a</sup> and John Pigbon (fig. 22) and Richard Blake (fig. 23) in 1566,<sup>b</sup> being especially so.

There is nothing to show whether these were notaries, but I believe they were.

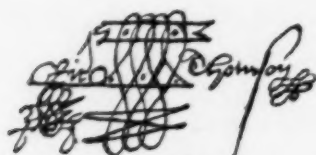


Fig. 20.  
Notarial Rubric of Richard Thomson,  
1564.



Fig. 22.  
Notarial Rubric of John Pigbon,  
1566.

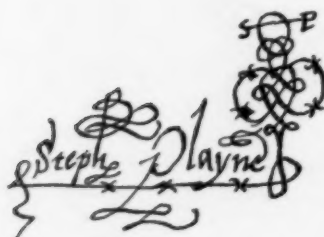


Fig. 21.  
Notarial Rubric of Stephen Playne,  
1564.

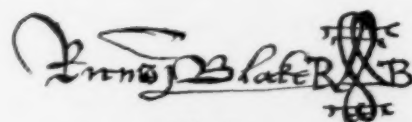


Fig. 23.  
Notarial Rubric of Richard Blake, 1566.

The next mark is one in the year 1577, the 5th July.<sup>c</sup> It is in the shape of a cross, and is the mark of George Samwell (fig. 24). He writes his name, printing fashion, in the foot, and describes himself as *Notarius publicus*. He also has a motto, *Gloria deo Soli*, written across the stem of the cross, the word *deo* being between the two intertwining stems of the mark.

It was customary upon the death of a brother to indicate the fact of his death in the book by the word *mortuus*. For some reason George Samwell is described as *defunctus*.

This is the last cruciform mark in the book.

There is a very interesting mark of one Thomas Lucas in the year 1580.<sup>d</sup> It is in the shape of a rubric, but is sufficiently important to be called a mark (fig. 25). Thomas Lucas signs his name on either side of it, and beneath it he has a motto, *Post Tenebras Lux*, obviously a play upon his name. He also signs at the foot of his subscription, again repeating his mark and motto. This place

<sup>a</sup> Page 121.

<sup>b</sup> Page 123.

<sup>c</sup> Page 129.

<sup>d</sup> Page 133.

of signature was an innovation; up to this time the signatures had been in the margin.

The signature and mark at the foot of the subscription correspond with the signature and mark in the margin.

Alexander Wytton, a son of Thomas Wytton, whose name has been before referred to, was admitted to the livery of the company in 1584.<sup>a</sup> He has neither notarial mark nor rubric. He says in his subscription, *Admystus sed non expertus scientia*. No doubt he was admitted by patrimony, and not as an acting scrivener; in fact, he held the same position in the company that I do.

Leonard Browne and Robert Andrews, admitted in the year 1588, have very curious marks (fig. 26), which are unlike any in the book, and must have given them a very great deal of trouble to make.<sup>b</sup> Each consists of an ornament of interlaced work. There are plenty more rubrics, but these are the last marks.

This really concludes my description of these marks, but I must say a word or two illustrating the use of them. It happens that there are two references to notarial marks in *Archaeologia*, to which I shall ask your reference, and it further happens that they illustrate to some extent the different functions of a notary and the manner in which the notaries discharged them.

First, as to a papal and imperial notary. In the thirty-seventh volume of *Archaeo-*

<sup>a</sup> Page 138.



Fig. 24. Notarial Mark of George Samwell, 1577.

Thomas Lucas.

Tho: Lucas.  
Post Tenebras Lux

Fig. 25. Notarial Mark of Thomas Lucas, 1580.

<sup>b</sup> Page 141.

logia,\* there is an example of a Spanish notary of this description notari-ally attesting a document in accordance with the provisions of the Civil Law, and to this attestation he appends his mark.

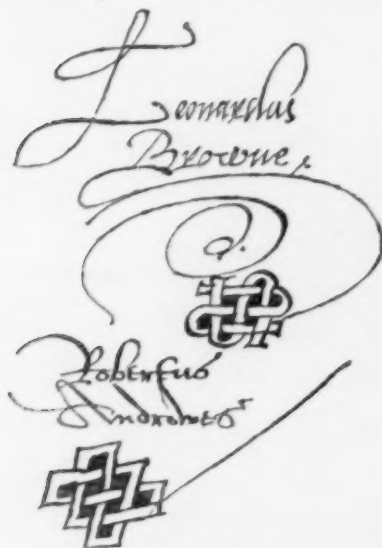


Fig. 26.  
Notarial Marks of Leonard Browne and  
Robert Andrews, 1588.

The mark is figured (fig. 27), and it will be seen that, though very coarse, it belongs to the same family as those in our Common Paper. From its date, 1476, it should have been better. Gaspar Darinyo, to whom it belonged, says *meum solitum artis Notarie apposui signum*.

For a second instance in print I would refer to the admirable representation of a notary's mark in the print of the *Missale ad usum Ecclesie Westmonasteriensis*,<sup>b</sup> published by the Henry Bradshaw Society. The mark is here reproduced by the Society's permission (fig. 28).

John Paynter, who attests the document, which is an ecclesiastical one, affixes his mark, a cross bearing a strong family likeness to our own, with a motto in the foot, *Laus et honor Deo*.

John Paynter calls himself *Clericus Londoniensis Diocesis publicus Auctoritate Apostolica Notarius*. He was not a scrivener, and could not have acted in this way within the City.



Fig. 27.  
Notarial Mark of Gaspar Darinyo, 1476.

\* Vol. XXXVII., page 73.

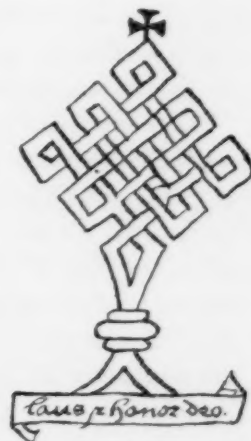


Fig. 28.  
Notarial Mark of John Paynter, 1500

<sup>b</sup> Fasciculus I. p. iv.

And now as to the rubric used by a scrivener and notary in the City of London.

*Thymus* *Thymus* *Thymus*

Fig. 29.  
Notarial Rubric of Morgan  
Williams, 1497.

Florenz  
L. K. Jura

Fig. 30.  
Notarial Rubric of John Stoberd, 1539.

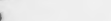
Concordat cum originali & infra scriptum Luticem sigill & lib ex fidei  
plene examinata collata me Johis Etobed notari p<sup>r</sup> fidei & sic  
me manu mea propria fidei subscripsi.  173

Fig. 31. Certificate with Notarial Rubric of John Stoberd, from the parish book of St. Christopher-le-Stocks.

Mr. Stoberd describes himself as a notary, though he registers no other mark

• Page 90.

<sup>b</sup> Page 104.



than his rubric. I could multiply these examples, if not indefinitely, to a very considerable extent, but I must abstain from doing

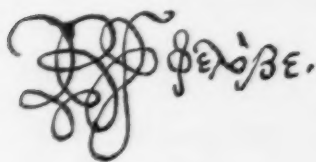


Fig. 32.  
Notarial Rubric and Signature written  
in Greek, from the parish book of  
St. Christopher-le-Stocks.

this, and also from diverging into some very interesting particulars relating to the execution of Thomas Wytton's lease. It was written out and in part illuminated by a scribe who signs himself in Greek characters *φελδβε*. He has for a rubric an elaborate initial letter which is, I think, B. F. (fig. 32). He also signs his name in an illuminated initial. He was

neither a notary nor a scrivener, and I think must have been a servant of Mr. Stoberd.

I would only add, in conclusion, that upon rare occasions scriveners appear to have altered their rubrics. Human ingenuity in making scrawls with a pen has a limit, and apparently some rubrics were too complicated for general use.

XIV.—*On the Roof of the Church of St. Andrew, Mildenhall, Suffolk.*  
*By J. G. WALLER, Esq., F.S.A.*

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Read February 2, 1893.

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THE interior of the beautiful church of Mildenhall in Suffolk is remarkable for its spacious and noble proportions. Its roof of oak must take a chief place amongst the many fine examples in the eastern counties. The chancel is of Early English architecture, but the nave and aisles belong to the fifteenth century. It is to the roof of the latter to which I shall direct your attention. It has never been painted, as was so commonly the practice in the county, and therefore has that grey colour which ensues when no extraneous matter has been applied. The roof of the nave is divided by seven principal beams, supported by spandrels with tracery, with additions sustaining the rafters. These beams are highly ornamented with a crested ridge and battlements, characteristic of the Perpendicular period of the fifteenth century. Besides this, they are decorated on the face by a series of small demi-figures of angels arising from a nebuly base, and holding scrolls, which sometimes pass from the left shoulder and sometimes from the right, all made from the same pattern. These are carved separately and fixed upon the other work, and from their colour may possibly be made of sycamore, a tree which grows luxuriantly in the vicinity and in other parts of the county. They are also repeated upon the upper part of the wall-plate throughout, and are intended to represent the passage from *Te Deum*, "To Thee all angels cry aloud," in accord with the general subject to which I believe the whole belongs.

Besides the principal support, there are intermediate spandrels raised upon a beam projected horizontally from the wall-plate, under which, and forming part of it, are figures of other angels, nearly of life-size, arising from a nebuly base, with the wings widely expanded, and, as it were, hovering over the congregation beneath. The idea is very pretty and the execution effective. I shall presently refer to other examples in illustration.

Now, directing our attention to the east end, there will be seen on either

side a figure with hands conjoined in prayer, abutting directly on the wall. The same arrangement is also at the west end. Proceeding westwards we come to the first pair of angels just referred to. They once held emblems, which are, however, broken away. This has a significance, as I believe a very important and essential figure has been removed from near here, possibly at the same time, by the iconoclasts of the sixteenth century. The next pair of angels hold lutes. Now the lute was a very favourite instrument, which developed in the fifteenth century, and abounds in the compositions of Italian, Flemish, and other schools. In the sixteenth century, to play upon it was considered to be one of the accomplishments of a gentleman, and in southern Europe it is still in use. But I was not prepared to find it in favour with the theology of the time. There is a passage, however, in a sermon of that curious collection, *Dormi securè*, which directly specialises it thus :

“Et cantate domino, quia benefecit vobis prebendas largas concedendo. Secundo, do tibi instrumentum musicale *lutinam*. Nota. Lutina est instrumentum magnum respectu aliorum instrumentorum, sic tua vita debet esse in exemplum omnium statuum: et in secularibus hominibus bonam et sanctam vitam causare.”<sup>a</sup>

In the same sermon reference is also made to the instruments of the Passion, viz. the crown of thorns, the nails, the lance, which we shall find here. The next pair of angels, however, hold books which, one might readily suppose, would signify those of the old and new law, even if it were not justified by a sermon in the same collection. Of the two angels in succession, that on the north holds the cross and crown of thorns, the opposite one on the south the hammer and nails. The last two hold shields. That on the north bears a cross with scourges, &c.; the other is mutilated, but, judging by precedents, it should have been the well-known device of the Trinity, the two being very commonly seen at the doors of churches in the eastern counties. These devices, which appear on the roof of the monks' choir at St. Alban's abbey church, are there named respectively the “Shield of Salvation,” and the “Shield of Faith.” The corbels, on which rest the spandrels by the chancel wall, have the shields of St. Edmund and St. Edward the Confessor, saints dear to the English people, and the first, the special saint of East Anglia.

Now, considering the character and arrangement of the details just given, and the close analogy they bear to that which is familiar to us in mediæval ecclesiastical art from early times, one cannot do otherwise than assign the entire subject

<sup>a</sup> *Sermones Dormi securè. De novo anno.* Numerous editions of this work were printed at Lyons and elsewhere at the end of the fifteenth and early part of the sixteenth century.

to "Christ coming in his glory," founded upon the text of S. Matthew xxv. 31. It was the chief subject, in various phases of development, over altars, in domes, and other conspicuous places in our cathedral and parish churches. But the figure of Christ, termed the "Majesty," from the Vulgate translation of *δοξη*, is here wanting, though all the accessories are present as in the text, "and all the holy angels with him" are duly supplied, and, as we shall presently see, the associated Apostles, as in Durandus.\* One must consider, therefore, that it was destroyed, together with the rood-loft, in the sixteenth century. When this took place, the emblems held by the first two pair of angels, which precedents would teach us were the lance and the sponge, were doubtless also removed. It is not probable that the principal figure which governed the whole subject was omitted.

It will be well, however, if I now appeal to another example at the church of March, in the adjoining county of Cambridge, where is a roof of great beauty of design, similar in date and without mutilation. Here the termination of the hammer-beams throughout have demi-figures of angels, with wings displayed and holding divers emblems. The lower spandrels are supported by imposts, consisting of a series of figures beneath canopies, apostles, saints, angels; and in the centre, on one side the figure of the Majesty, and on the opposite that of the Blessed Virgin Mary, with the usual accompaniments of instruments of music and the appropriate emblems. This roof, though very beautiful in design, is inferior in execution to that of Mildenhall.

I will now describe the roof of the north aisle, in which there is abundance of detail to interest us. It consists of seven principals with spandrels sustaining them, resting upon brackets composed of a series of figures of various characters, over each of which hovers from a nebuly base the demi-figure of an angel, whose wings embrace the figure, and thus constitute the guardian angel. All are seriously mutilated, and the features and emblems destroyed, a fate which has befallen them throughout the aisles. These figures are not, however, intended to be saints, so one must conclude that they represent benefactors, or the several orders of society, but most likely the former.

Beginning at the west end, is a male figure in a tunic with belt and pendant. The second is a female figure veiled, richly draped. It is not certain if this be intended for a recluse or a widowed lady; I am inclined to consider it the latter. The third is also a female figure, with the head bare, richly draped in a dress with very ample folds. The fourth is a male figure in loose over-dress and loose sleeves,

\* *Rationale*, lib. i. 7.

bearing a wallet on the left side slung by a strap across the right shoulder. The fifth is a bearded figure in tunic and mantle. The sixth, a female figure in tunic and mantle, finely draped. And the seventh, a priest in alb, crossed stole, and cope. If we consider these figures to represent the different orders of the time, yet possibly benefactors, which this last of the priest reasonably suggests, then the second, the veiled lady, might be an abbess, the man with the wallet an almoner, and others civil personages. The corresponding supports of the south wall have figures of angels only.

Before proceeding further, it is necessary to point out, that there are six accessory intermediate supports which arise from figures, almost of life size, projecting horizontally from a nebuly base on the wall plate. All the features and hands with emblems, which doubtless distinguished them, being gone, one can only speak of them as being finely designed, and the drapery admirably executed; in fact, no finer can be found of the time, prominent in the history of mediæval art, the first half of the fifteenth century. As a similar number of figures exist in the south aisle, no doubt we thus have the twelve apostles, which I have already shown belong to the general subject to which I have referred.

I now take the series of figures carved upon the horizontal beams superimposed above the spandrels previously described. These I consider as symbols of evil. Beginning at the west end, the first which commands our attention is the figure of a woman having the horned head-dress, the face grotesquely treated. I assign this to Pride, as the mother of the deadly sins in mediæval theology, or possibly *Luxuria*, both being the object of special satire, and in Spenser's *Faery Queen* we see a picture of this vice which is built up on mediæval traditions.

The subject of the west face of the spandrel immediately under this may be called a demoniacal serenade for the lady's behoof. It represents one demon playing upon an organ whilst another blows the bellows, which are similar to the common domestic utensil. On the opposite side is St. George encountering the dragon, here a wyvern, about which I shall presently have something to say.

The next figure may be intended for a Saracen as an enemy of the Christian faith. It is bearded and crowned, dressed in a short tunic, with boots open loosely at the ankles, and holds a bare scimitar by the right hand. It is not improbable, however, that a Dane is here represented, for the traditions of the ravages of that people are even now quite not dead in Suffolk, in connection with St. Edmund, and we are here not many miles from Bury, the locality of the great monastery dedicated in his honour. Besides, I shall have to note an illustration of his



legendary history, and it is to be remarked, that in the poetical version by Lydgate,<sup>a</sup> the miniatures give the Danes a scimitar, and put them in armour never worn at any time on this earth. The mediæval artist sometimes indulged his imagination even in costume.

The beam in succession has a lion crouching, a full face of one being added behind it. I call this *leo rugiens*, but I must note that in mediæval art the lion is also a symbol of an overcomer of evil, and one of rank and honour. It has this meaning when at the feet of our effigies; and in a subject once common, "The grades of Human Life," as developed in the fifteenth and sixteenth centuries, which is still got up in parts of France, it is placed beneath the king or judge. In an Italian example in my possession there is added a couplet which says "that the man of forty is king among mortals as the lion is among all animals."<sup>b</sup>

Following in order now comes the wyvern, as it is called in heraldry, but I doubt if of earlier date than the fourteenth century. But what is the wyvern? Francis Thynne in his animadversions on Speght's edition of *Chaucer*, 1598, says "a Wyuer is a kynde of serpent of good Bulke, not vnlike vnto a dragon, of whose kinde he is, a thinge well knowen vnto the Heroldes."<sup>c</sup> Although the wyvern is a distinct personality and creation of mediæval art, yet the dragon in early forms could scarcely be described differently, as in the example now preserved in St. Nicholas' church, Ipswich, a relic from a previous church of St. Michael, and probably not later than the ninth century. In fact the wyvern forms part of the history of the dragon, which goes through all sorts of phases. It is sometimes a mere serpent, sometimes even bear-like, sometimes half human, half animal or demoniac, until in the sixteenth century we see it in St. George's encounter grimly developed in throat and teeth and a tail with many a fold, and it is to heralds we are indebted for a distinction between the two. As in this church of Mildenhall the wyvern in its various phases is more developed than I ever saw anywhere else, I may, perhaps, be allowed to dwell somewhat at length on the history of this singular combination. Its name evidently descends from the same source as viper, indeed it is only a variation of the word.

In the example before us, we have a long reptilian form, with bat-like wings, four feet, in this deviating from an established type of which there are several instances all around, and a knotted tail with a terminal grotesque head. Its own

<sup>a</sup> Harl. MS. 2278, Brit. Mus.

<sup>b</sup> This engraving has the name of the artist, "Per me Cristofero Bertello," and the couplet runs thus:

L'huom' di quaranta è Re fra li mortali  
Com' è il leon fra tutti li animali.

<sup>c</sup> Ed. Farnivall, Chaucer Society, Second Series, xiii. 41.



head has a blunted snout and long ears (fig. 1). One might easily imagine that the head at the end of the tail was a freak of the artist of this example, but it



Fig. 1. Figure of a Wyvern.

shows how dangerous it is in ecclesiastical art to assume an individual idea, as in that at the feet of abbot Benedict in Peterborough cathedral church, 1193, we have the same peculiarity, notwithstanding the interval of over two centuries between them. It also

occasionally appears on the tails of demons.

Without taking at present the orderly arrangement of the carvings, it will be more convenient to complete the history of the wyvern. At the base of the



Fig. 2. Wyvern and Lion fighting.

central spandrel on the south side is the conflict of this creature with the lion, where again it has the abnormal four legs instead of two, and the whole composition is inferior. This symbolic subject (fig. 2), in which the lion is overcoming the spirit of evil, possibly as the lion of the tribe of Judah, just as St. George on the one hand and St. Michael on the other, I do not think appears before the twelfth century, and the earliest example I have met with is in the cathedral church of

Modena. This, constructed in the beginning of that era, belongs to the remarkable style of Lombard architecture of which northern Italy shows so many examples, and, if in their plan the Teutonic intellect prevails, I think in sculpture we get that of Italy. The group of which I now show a sketch forms the basis of one of the columns which support the presbytery, and is remarkable for the energy of its execution (fig. 3). The lion has its enemy prostrate in its power, but yet the wyvern attacks it, a phase which runs through the whole of the middle ages. Let us now pass through this period to a fine composition of the sixteenth century in the cathedral church of Würzburg, so interesting for the series of monuments to its prince bishops, lordly prelates, who grasp the sword as



Fig. 3. Lion and Dragon at Modena.

if more in character with their state than the crosier. It is at the feet of a standing figure of bishop Laurence a Bibra, who died 1519, and the fabulous

wyvern with lizard-like head, long neck, prominent vertebræ of spine, and reptilian wing, has so natural an aspect that one would hardly be surprised if it turned up as a fossil at Solenhofen (fig. 4). An excellently designed example of the subject is in the Lady Chapel of Ely cathedral church. It appears also on the print of a mazer at Harbledown.\*

The wyvern again appears on the spandrels of the south side, biting the tail of another analogous reptile, but wingless, which lolls out a long tongue; and in another place this reptile returns the compliment to the wyvern. Its meaning, if it have any, is obscure, for both figures are symbols of evil (fig. 5). I have already mentioned the wyvern taking the place of the dragon with St. George, and it also does the same with St. Michael at the east end of this aisle, if indeed a difference between the two exists out of heraldry.



Fig. 4. Lion and Wyvern at Würzburg.



Fig. 5. Wyvern and Reptile.

In the south aisle it again appears on the spandrels; in one instance a female demi-figure is grasping one on each side of her by the throat, as if strangling them; in another, it is seizing upon a bearded figure of a man, whose right hand is in its throat, his left raised to his mouth, and left leg raised and bent across the other. His attire seems to be a closely-fitting, longitudinally padded garment, as in the military gambeson. Some meaning, doubtless, was attached to these subjects when executed; perhaps of a covert nature, as in other instances to be described; but it is hopeless to attempt to unravel them, and guesses generally have a tendency to increase our darkness.

To return to the north aisle and to the order of the spandrels. The beam in succession has carved upon it a figure in short tunic, with cape and hood, both hands to his head, and on one side a dagger or anelace at his girdle, and on the other a pouch pendant. It is difficult to assign this figure, but its costume is that of a burgher. The position is abject, as in the female figure described, and as all these beams have symbols of something evil, may we suppose that a naughty burgher of Bury St. Edmunds is here *in terrorem*, one always in conflict with the lord abbot, for it must be remembered that Mildenhall belonged to the abbey, and monks were never unwilling to indulge in such satire. The last beam has a repetition of the lion.

The spandrels of the north side are all filled up with subjects in low relief; on

\* *Archæologia*, I. 138.

the west face these are scriptural, on the east legendary or heraldic, with one exception. Beginning from the east end is, first, St. Michael encountering the dragon (wyvern), then the Annunciation, the angel appearing to Abraham to restrain him from the sacrifice of Isaac, the announcement of the angel to the shepherds, the baptism of Christ, and a demon playing on the organ, as already described. None of these call for any special mention. They are inferior both in composition and execution, and there was some difficulty in accommodating the figures to the shape of the panel.

Taking now the eastern face, beginning from the west end with that against the wall, is a subject that is very obscure. It consists of a number of seated figures and one kneeling, seemingly women veiled, but the execution is not good and it is in a dark position. I can make nothing out of it. The next subject is St. George and Dragon. Then comes a swan, with a coronetted collar about the neck, and chain attached, facing a dog (fig. 6). This, being perhaps heraldic, I shall deal with it and others similar with the numerous emblems of the kind. The next is an antelope,

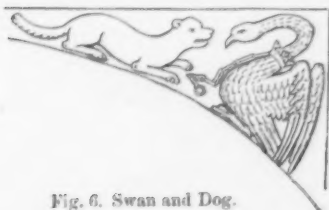


Fig. 6. Swan and Dog.

with crown and attached chain round the neck, in front of an eagle or falcon (fig. 7). Then a figure of a man winding a horn, holding a bow, booted to the knees, and with cap with displayed hood; a hart, with head averted and recumbent, is by his side; then a hare and hounds. This is probably intended for a part of the story of St. Eustace. The last is a griffin and what may be a ram.

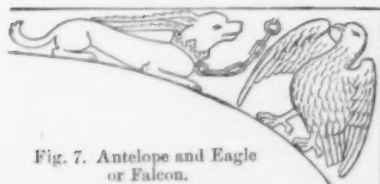


Fig. 7. Antelope and Eagle or Falcon.

On the spandrels of the south wall some subjects have yet to be described. The first I shall notice is the most remarkable of the series. It represents an animal, seemingly a dog, having the head of a cock in its mouth, the body being thrown across its back. In front is a dog; and behind its tail is grasped by a grotesque or demoniac figure (fig. 8). Some satire



Fig. 8. Demon, Dog and Cock, and Dog.

must be here involved, but it is difficult even to suggest what, and therefore I only describe what my sketch represents. Two others are remarkable; one is a boar meeting a talbot dog. The other has the boar crouched down in sleep or death, and a talbot dog behind, as if barking (fig. 9). We know that the talbot dog was a frequently-used symbol of the great hero of the time, John



Fig. 9. Boar and Dog.

Talbot, earl of Shrewsbury, and is conspicuously shown in the Shrewsbury book.<sup>a</sup> We know also that the boar was a symbol of the duke of Gloucester, afterwards Richard III., and the work we are considering was executed in the reign of Henry VI., facts to be borne in mind in any attempt to read the meaning of the matter before us. Another singular combination consists of two figures, half animal half human. One is a male figure with closely-fitting jerkin to the waist, ending in the hinder parts of a lion, the head with a hood of the time. The other is a female head veiled, with drapery drawn across the waist, ending probably in the haunch of a lioness. The heads of the figures meet in the middle. To attempt any explanation would be hopeless. There is also one of a hound seizing by the tail a hart, whose head turns backwards as it is crouched prostrate. The last to be described, however, will have its true explanation, and it suggests, that if one group has a meaning so have the rest, if we had the clue. It represents a crowned head, between a wolf, which is watching it, and a lion heraldically passant guardant and crowned. This obviously refers to the legend of St. Edmund. Lydgate, the monk of Bury St. Edmund's, wrote a poetical version of the life and martyrdom of the saint, now preserved amongst the Harleian MSS. One of the numerous illuminations shows a white wolf sitting by the head, which is crowned. The following lines accompany it. After stating that the head of the martyr was hidden away apart from the body, it says :

But blissid Jhū which every thyng may se  
His holy martir listnat so forsake  
Ut of his grace and merciful pite  
Knowyng that he deied for his sake  
Suffred a wolf his holy hed to take  
And to conserve it ageyn assautis alle  
That foul nor beeste sholde upon it falle.<sup>b</sup>

We must look upon the introduction of the lion as an armorial device, a symbol only of royalty.

Having now gone through all the main features, together with the various subjects constituting the details, I shall conclude with an account of the numerous armorial badges dispersed on the wall-plates, and on other portions of the aisles. As the part of the church under consideration was erected in the first half of the fifteenth century, during the reigns of sovereigns of the House of Lancaster, one

<sup>a</sup> Royal MS. 15 E. vi. British Museum.

<sup>b</sup> Harl. MS. 2278, f. 64.

might easily suppose that heraldry would have special reference to that branch of the descendants of Edward III., and of partisans who adhered to it; and so we mostly find it, though as yet, perhaps, the struggle between the two houses had not begun, and only displayed a dark horizon, herald of the coming storm. Of these devices the most beautiful is undoubtedly that of the *white swan*, in heraldic language, *a swan argent, collared and chained or*: the collar a coronet. This appears well developed in one of the spandrels of the north aisle (see fig. 6), with a dog crouched in front menacingly; but, if it has any significance, it is veiled from us.<sup>a</sup> This badge is derived from the family of De Bohun; Henry Bolingbroke having married for his first wife Mary de Bohun, youngest daughter and co-heir of Humphrey earl of Hereford, Essex, and Northampton. But its origin has been traced to Adam Fitz-Swanne, whose father had large estates in the north of England in the time of William the Conqueror. Thence it passed through the Mandevilles, earls of Essex, by the marriage of Maud Fitzpiers, heiress of Beatrice, sister of Geoffrey de Mandeville, with Humphrey de Bohun before named. Thomas of Woodstock, youngest son of Edward III., was, in right of his wife, Eleanor de Bohun, elder sister of Mary, earl of Essex and Northampton; and on the beautiful brass to her memory in Westminster abbey we see the badge of the swan. The Nevils, Beauchamps, and other noble families were also entitled to use this badge.

Associated with this is another of significance, also found here prominently in the same aisle. This is the antelope, which is seen on the chantry chapel of Henry V. in Westminster abbey. Mr. Willement has given good reasons for showing that it also came from the De Bohuns. So, therefore, when Henry of Bolingbroke appeared in the lists at Coventry against the duke of Norfolk, he had his horse caparisoned in blue and green velvet, embroidered sumptuously with swans and antelopes of goldsmiths' work. The example in the aisle shows the antelope couchant, collared in the coronetted form and chained, in front of an eagle displayed, on which presently (see fig. 7). On a portion of the wall-plate of the south aisle the swan and antelope alternate with each other.

As regards the eagle in English heraldry, it has always been attributed to a German descent; and was without doubt so associated from the time of Henry II., whose mother Maud was empress of Germany, and it thus became one of the cognizances of the royal house of England. For our purpose it is enough to state that John of Gaunt used it, as it appeared on "his velvet beds of silk, with blue

<sup>a</sup> It is to be remarked, however, that the recurrence of the dog, the talbot, in so many examples must have had some meaning.



eagles displayed," which he bequeathed to his daughter the duchess of Exeter. On the tomb of Henry IV. is an eagle volant, and it is appended to his collar of SS. Thus it descended to his son and grandson.

The griffin appears in one of the spandrels, and also upon the wall-plate. This cognizance, though used by more than one family, may probably be here assigned to the Beauchamps, as it is shown at the feet of Isabella Maudit, who married William de Beauchamp, whose son became first earl of Warwick of the name, in the series of figures by John Rouse, in the well-known Warwick Roll.

Many of the devices of the wall-plate in this aisle are lost. There is a pig or boar with collar and bell attached to it. We usually look upon this as the emblem of St. Anthony, but whether ever adopted as an armorial badge, which one would here assume it to be, is at present unknown to me. A stag lodged with long horns extending behind may be the hart, a Plantagenet badge, which was in favour with Richard II., and appears frequently on his monument in Westminster abbey. But as it is not one which plays a part in the partisan struggle, it might easily, like others, be assumed by both houses. A horse or colt couchant may be the emblem of the Colt family, of the adjoining county of Essex; if, indeed, they had sufficient importance by possession of property or otherwise. A lion guardant needs no explanation, but an animal collared and chained is another of those not easy to determine.

A collared greyhound cannot be specially assigned, but the boar proper must be given to the duke of Gloucester, afterwards Richard III., and, with the recurrence of the hart, may be an evidence, that as yet no roses had been plucked in the Temple Gardens, as symbols of the coming strife.

The wyvern, which appears in one of the spandrels of the south aisle and several times on the wall-plate, was the cognizance of Thomas, lord Bardolf, who joining with the Percys was with them defeated by the sheriff of Yorkshire, February 19th, 1407, when the earl of Northumberland was slain, and lord Bardolf taken prisoner, wounded unto death. His two daughters became his coheirs, and the younger, Joan, was married to Sir William Phelip, of Dennington, in the county of Suffolk, where is a fine monument to their memory, having the wyvern in its best development at the lady's feet. Sir William was a stout adherent to the side of Lancaster, served in the battle of Agincourt, was made knight of the Garter, and among many other appointments was treasurer of the household, and thus had the chief conduct of the funeral of Henry V. In the succeeding reign he performed also many important services at home and abroad. At a council held at the Hospital of St. John of Jerusalem he was styled Sir



William Phelip, knight, chamberlain, and was then raised to the title of Baron, as William Phelip, lord Bardolph. He died in 1441, probably whilst the work we are now considering was being executed. The other coheir, Anne, married Sir Reginald Cobham, of Sterborough, and in Lingfield church, Surrey, is a noble monument in alabaster to them, doubtless by the same hand as that at Dennington, and in which the same cognizance appears.

Part of the wall-plate of this aisle has the swan and the bear alternately. The latter being the well-known cognizance of the Beauchamps, earls of Warwick, borne also by the Nevils and others who held the title.

I have thus brought my task to a conclusion by describing all those details of importance. Previously to the destruction of the rood-loft there was doubtless also a fine screen connected with it, as was common in the eastern counties, and particularly in work of the fifteenth century. But of this there is no trace, though some worked-up fragment may have belonged to it. I have refrained from the attempt to explain many details, which are so obscure as to elude research.

XV.—*On the Camp at Ardoch, in Perthshire.* By T. M'KENNY HUGHES, Esq.,  
M.A., F.R.S., F.S.A.

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Read March 16th, 1893.

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WE may accept as a fact that the Romans did advance in force, at any rate as far as the Graupian or Grampian Hills, and we may feel sure that they constructed camps, and strong camps too, along their line of march.

It is, however, very doubtful whether we can as yet identify with certainty the stations mentioned in the accounts of the campaign. Before we can consider ourselves in a position to trace the Roman route to the Highlands, every camp occurring in the districts traversed by them should be examined in the light of what is known of Roman methods, and also compared with the military works which, in the present state of our knowledge, are referred to the pre-Roman and post-Roman inhabitants of the northern part of the island; indeed the whole subject of earthworks calls for further inquiry. There are certainly Norman earthworks put down as Roman. There are some rectangular enclosures regarded as Roman camps which are only the moats of fortified manor-houses, and some so-called Roman outposts which are only medieval tower-mounds.

It is less common, I think, to refer any British earthworks, wholly or in part, to the Romans. This arises from the essential difference between the two classes of entrenchment. In the Roman camp we find as a rule a fortified enclosure thrown up to meet the requirements of an invading force generally ignorant of the country and of the numbers and distribution of the enemy, and constructed according to a rigid military system, with direct reference to the number of troops by whom it is thrown up and by whom it is to be occupied. The rules of

castrametation have been laid down somewhat differently by different Roman writers, but in all essential particulars, such as concern us in our present inquiry, they are the same.

The camp is pitched in an open place on the line of march. The troops cannot wander far for water or other requisites. The camp is defended by men who know exactly what position to take in case of attack. There are no women and children, nor cattle and household goods. All they require is a line of stockaded earthworks to check a rush, and clear ground all round so that they can see the advancing enemy. Camps were thrown up on the march as if they might become permanent, and stations intended to be permanent were constructed on the same lines, of which the mode of defence was understood by every Roman soldier.

Now let us inquire what the conditions were under which the British camps were constructed. There seems to be sometimes an impression that some, if not most, of these were thrown up to oppose the Romans. A moment's consideration will show that such earthworks must be quite exceptional. All accounts agree in describing the British races and their nearest continental allies as very brave, with many warlike appliances peculiar to themselves, and clear evidence that they had continual exercise in the art of war. They could not in the few years of Roman advance have learned to construct fortifications, and certainly their camps were not suggested by the Roman camps, from which they differed in position, form, and arrangements for access. They did not then learn for the first time how to throw up an earthwork or make a scythe-axled chariot.

In the next place we know that amongst the inhabitants of these islands there were various races, differing from one another in physical characteristics, in habits of life, and in amount of civilization, and that they were readily stirred up against one another; in fact, that they must have lived in an almost perpetual state of warfare. What, then, were the preparations that such people had practically to make with a view to avoid collision, and to provide for the safety of their families and property when the outbreak of hostilities became inevitable. The great cause of disagreement was pursuit of game or straying of cattle beyond their own property, and now and then the driving home of rather more cattle than had strayed. Therefore, where natural features did not impose a sufficiently clear and easily-maintained boundary, a strong stockaded earthwork was constructed to mark the boundary, to keep in straying cattle, and to check raiding; and, as this was likely to be thrown up along the lines determined by previous fighting, it would probably coincide wholly or partly with strong and easily-defended frontier lines.

When, however, a *casus belli* had occurred, and an invasion of an adjoining territory was decided upon, slaughter of the enemy and spoil by way of indemnity were what was sought for. The spoil was probably the chief inducement in most cases in those early days, as it was down to much later times, in the Highlands, where the pinch of poverty often drove the bravest of the hillmen to raid the cattle of the lowlands, and solved the difficulty of agricultural depression by the confiscation of neighbours' goods and the reduction of the surplus population which generally followed each such attempt.

The invaded tribes, on the other hand, if not prepared or strong enough to meet the enemy in the field, must withdraw to some stronghold to which access was easy for them, but resistance could be offered with better chance of success should the enemy attempt to follow them. It would not do for them to be too much hurried, for the whole community, women, children, cattle, and goods, had to be got into the fort. There could be no such thing as a prolonged siege. The place must be stormed or held till organised resistance or failure of provisions compelled the enemy to withdraw. In looking about for a suitable position for such a stronghold the natives would get away from the great thoroughfares and choose a place where they would have room for all the inhabitants of the district and their cattle; but, having regard to their personal safety, would construct an inner and stronger retreat, into which they would be crowded only in the last extremity. This was not the sort of work to be done in haste in the face of an enemy. The British camps show care in selection of the position and in the construction of the lines. The people and the cattle may be expected to have time enough to get in, through a gap in the outer earthwork, to travel along the bottom of the fosse, perhaps half round the camp before they come to the opening through the next rampart. The enemy cannot thus advance along the fosse, which is commanded along the whole line of march by the vallum above. They must take the place by a rush straight across all the ramparts.

Thus there is an essential difference in the object and mode of construction of the Roman and British camps, and as a general rule it is quite easy to pronounce at once whether a camp belongs to one or the other. But there are some apparent exceptions, as, for instance, if the Roman route lay over high and broken ground and the natural features conveniently lent themselves to the strengthening of the camp, as at the north end of the Pennine range. In the case of the British camps also, if the tribe lived on the lowlands and the camp of refuge could not be placed on a hill or, if the natural features necessitated a rectangular form, there is sometimes a difficulty in assigning the camps to their proper origin. Such a case

occurs in the camp of Ardoch (see fig. 1) in Strathallan, in Perthshire. This celebrated camp is situated about  $2\frac{1}{2}$  miles from Greenloaning station on the

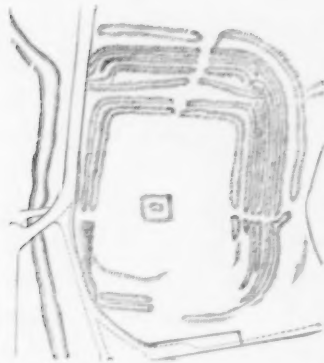


Fig. 1.  
The Ardoch Camp as it now appears,  
reduced  $\frac{1}{4}$  from the 25-inch Ordnance  
map.

Caledonian Railway, and about a mile north of where the Knaik runs into the Allan. Orchill moor lies to the north, and part of the forest of Glenertney to the north-west. Sudden attacks on the inhabitants of that part of Strathallan were more to be expected from the north and north-west than from any other quarter. Instead therefore of looking to the moor and the forest for their retreat, these were rather a source of danger. So they must build a stronghold in the most easily defended position they could find on the undulating ground by the rivers. Such a position was offered by the terraced banks of the Knaik at Ardoch. (See fig. 1.) The river has cut a steep cliff along the west side, then turning slightly eastward

forms a flanking ditch, while an old river course extends from it eastward in front of the terraced slope which forms the south face of the camp. A similar sudden but somewhat less regular fall of the ground on the east leaves the area between it and the river in the form of a rectangular promontory which was easily converted into a very strong position by earthworks such as the British knew well how to construct. The north side was least defended by nature, and therefore a strong earthwork was thrown up from the steep scarped slope down to the river along the north front and about half-way down the east side. Within this there were four or five lines of embankment forming a kind of labyrinth. For although it appears that the ends of the first and second lines could be passed above the scarped river bank at the north-west corner, access to the interior of the camp could only be gained by forcing a probably palisaded bank in front or advancing along the whole northern front of the camp in the fosse, exposed to the missiles of the defenders. At the north-east corner there was another opening into the camp, where the defenders, if pressed along the same line, might enter. There is an inner fosse running to somewhat of a point at the north end of the camp as indicated by the dotted line in fig. 2. It is not clear whether this belongs to the original camp or is a modification of later date.

The British camp (fig. 2) was stormed, or at any rate occupied, by the Romans, who constructed a rectangular camp (fig. 3) entirely within the British lines, with a high vallum, a deep fosse, and small raised banks on each side of the fosse.

In order, therefore, to understand the structure of the camp at Ardoch, as now seen, we have to place fig. 3 on fig. 2 and the combination gives fig. 1.

Fig. 2 is clearly a British camp, only rather more nearly rectangular than usual, owing to the accident of the form of the ground.

Fig. 3 is an obvious Roman camp. It had four symmetrically placed gateways, and a level raised road was carried across the British lines up to each gate: the Romans thus at the same time destroying the labyrinthine entrances of the Britons and providing a direct access to their own gates. The Roman vallum commanded all the outer earthworks, and the Roman fosse was entirely cut off from all the ditches and intervals between the lines of the British camp.

It is not easy to make out in every case how far the Romans when they occupied a British camp found it necessary to alter the outer earthworks. One point however is, I think, clear, namely, that the Romans did not want to have so many lines to defend. That was foreign to their mode of warfare, so they finished off and joined up some of the British unterminated banks, as may be seen at the south-east end of the outer northern rampart.

Along the south side most of the lines of both camps have been destroyed in recent times.

The views as to the age and origin of different parts of the camp of Ardoch, which are put forward in this paper, are all founded on the form of the camps and the character of the entrenchments, and I have no evidence to offer from excavations or objects found in or near the lines. It is recorded on the 25-inch Ordnance map that a stone coffin with human remains was found in 1825 on the slope south of the camp, but this was close to the site of an ancient chapel, and may have been an interment in connection with it. From the same source we learn that a leaden coffin, with human remains, was found in 1832 about 200 yards east of the camp, but I am unable to give any further particulars respecting these finds. Yet I think I have offered sufficient evidence from the character of the earthworks to prove my point. It was not the Roman custom to throw up such a succession of



Fig. 2.  
The lines of the British Camp.

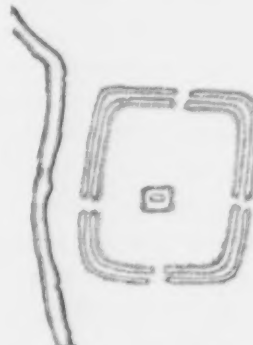


Fig. 3. The Roman Camp.



outer banks, and it was not in accordance with British methods to construct a central stronghold with four symmetrical entrances, while neither the one nor the other would be so foolish as to build a series of strong defensive lines, and then neutralise them by carrying roads across them on every side. The whole is however explained on the supposition that the Britons raised the outer works and the Romans the inner lines, and that the Romans made the roads to their four gates across the British lines.

There is an enclosure on the north of the camp which has been described as a procestrium, and, resting on the north front of the camp as a base, there are remains of earthen banks enclosing a still larger area. Cutting into this on the west side there is another similar, but probably more ancient, enclosure, the lines of which run obliquely to those of the other enclosures and of the camp. It is probable that these were merely the boundaries of the villages or area over which the dwellings of the natives were built, and within which they kept their cattle, and that they were thrown up at different times; that furthest to the west, it may be, even before the camp was constructed.

These earthworks are what are called by General Roy<sup>a</sup> the three *camps* at Ardoch,<sup>b</sup> as distinguished from the fortified position described above (fig. 1), which he speaks of as the *Station*.<sup>c</sup>

In the beautifully illustrated work published by our Society more than a hundred years ago, but after the death of its distinguished author, the relative position of all the earthworks referred to is clearly shown, and many details are given of structures which have been since obliterated.

When we have satisfied ourselves that the Romans occupied a pre-existing British camp at Ardoch, and threw up their own lines inside it, we have opened before us many suggestions for further inquiries. When was the British camp originally constructed? Was there first a native settlement here, and, if so, what encroaching new-comers made it necessary in later times to construct a fort? Or did the town grow up around a strong outpost of an invading people? Was it ever modified, and did it ever change hands in pre-Roman times, and did any tribe hold it and live on there after the Romans had gone? We cannot help feeling that this is a place where possibly great results might be obtained by judicious excavation around the camp and in the earthworks to the north of it.

<sup>a</sup> *Military Antiquities of the Romans in Britain*, by the late William Roy, F.R.S., F.S.A., Major-General, &c., &c. Published by the order and at the expense of the Society of Antiquaries of London, 1793.

<sup>b</sup> *Ibid.*, pp. 62, 63, Pl. x., Pl. xix.

<sup>c</sup> *Ibid.*, Pl. xxx.

XVI.—*The Mausoleum at Halicarnassus. A new Restoration.* By EDMUND OLDFIELD,  
*Esq., M.A., F.S.A.*

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Part I. Read June 15 and June 22, 1893.

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INTRODUCTORY.

It is with unfeigned hesitation that I venture to bring forward a new restoration of the Halicarnassian Mausoleum. For more than a century the form of this celebrated monument has been the enigma of architectural antiquaries, and down to the present time no solution has received so unanimous an assent as to be deemed conclusive. It is not indeed surprising that the earlier theories, those of Caylus, Choiseul-Gouffier, Canina, Texier, and others, should have been discordant, and to most minds unsatisfactory; for they were founded solely on the notices of the building found in ancient authors, and these notices are brief, desultory, sometimes veiled in figurative language, and sometimes to all appearance contradictory to each other, if not to themselves. Even the ingenious and tasteful designs of the late Professor Cockerell and Mr. Edward Falkener were prepared in ignorance of any material remains beyond the few slabs of sculptured frieze procured in 1846 by Sir Stratford Canning from the citadel of Budrum. But when at length it was resolved to supplement theory by fact, and to procure monumental in addition to literary evidence, when the resources of the British Government were liberally placed at the disposal of an eminent archæologist, to excavate the whole site of the Mausoleum, and bring to England all the remains of its architecture or sculpture which could illustrate its construction, it might have been expected that the mists of uncertainty would have disappeared in a flood of light. But very different has been the event. The publication of the results of this exhaustive exploration seems to have left the controversy little nearer to settlement than it was before. A kind of a negative progress has indeed been made by the elimination of some few elements previously open to doubt, but ample material for difference remains in the various methods of combining the elements which are deemed certain. The dodo was not recon-

structed beyond cavil from the preserved specimens of its skull and foot, though supplemented by ancient portraits as well as descriptions; and the comparative anatomy of mausolea is a less exact science than ornithology. Two carefully studied and elaborate restorations have been published in this country since the expedition to Budrum, and one, no less studied and elaborate, in Germany. The first appears to have been originally the production of Lieut. R. M. Smith, R.E., who commanded the engineering staff of the expedition, and was revised and completed by the late Mr. R. P. Pullan, F.R.I.B.A., who was added as architectural adviser; and this restoration was adopted by Mr. (afterwards Sir Charles) Newton,<sup>a</sup> the chief of the expedition, in the learned and able treatise brought out in 1862, in which he explained his discoveries to the world.<sup>b</sup> The second restoration is that of the late Mr. James Fergusson, the well-known writer on architecture,<sup>c</sup> and this is in somewhat trenchant opposition to the theory of his immediate predecessor.<sup>d</sup> The third is that of Herr Christoph Petersen, published at Hamburg a few years after the treatise of Mr. Fergusson.\* This restoration modifies considerably the architectural scheme of Sir Charles Newton and Mr. Pullan, and perhaps, in an æsthetic sense, improves it; but it is not the result of any fresh archæological evidence, or any critical recension or new interpretation of ancient texts. The scheme adopted by Sir Charles Newton has the unique advantage of being founded on personal observation of all the incidents of discovery by a highly trained explorer, and on several months' study both of the site itself and of each discovered architectural fragment in its pristine state. That of Mr. Fergusson bears the stamp of his long and perhaps unequalled acquaintance with the architecture of all ages and countries, his remarkable powers of analysis and comparison, and his clear and forcible method of statement. It will not, I trust, be thought that I am wanting in deference to

<sup>a</sup> Since this and the two following papers were read to the Society, this distinguished archaeologist, by whose valuable discoveries at Budrum the present investigation was originally suggested, has passed away.

<sup>b</sup> *A History of Discoveries at Halicarnassus, Cnidus, and Branchidæ*; by C. T. Newton, M.A., assisted by R. P. Pullan, F.R.I.B.A. 2 vols. Folio. London, 1862.

<sup>c</sup> *The Mausoleum at Halicarnassus restored in conformity with the recently discovered Remains*; by James Fergusson, F.R.I.B.A. London, 1862.

<sup>d</sup> The earlier portion of this essay was written several years ago, during Mr. Fergusson's lifetime; but I see no reason to modify anything I have said in it of that able and accomplished architectural critic, and, I may add, lamented friend.

\* *Das Mausoleum, oder das Grabmal des Königs Maussolos von Karien*. Ein Vortrag, gehalten zur Geburtstags-Feier J. J. Winckelmann's im Jahre 1865 von Chr. Petersen. Hamburg, 1867.

the ability and attainments of either of these distinguished critics, or insensible to the services they have each in different ways rendered to archæological science, if I venture, in the interests of learning, to submit their theories to the same frank though friendly examination to which I am perfectly willing to surrender my own.

The questions I propose to investigate are two :

- I. What was the architectural form of the Mausoleum ?
- II. What was the most probable arrangement of its principal sculptures ?

The first and more important question I propose to investigate thus :

- A. I shall examine all the passages in ancient authors which give detailed descriptions or measurements of the building. Under this head I shall incidentally bring the principal restorations hitherto proposed to the test of literary authority.
- B. I shall examine and compare all the extant remains of ancient sepulchral monuments which seem to present, whether as survivals or modifications, some probable indication of architectural features in the Mausoleum.
- C. I shall endeavour to deduce from the results of the two preceding processes certain essential propositions, to which any authentic restoration of the building must in my opinion conform.
- D. I shall submit the plans, elevations, and sections of a new restoration, not as pretending to any confidence in the correctness of all its details, many of which are purely conjectural, but simply as an illustration of one manner in which the propositions thus deduced might practically be applied.

#### A. EVIDENCE OF LITERATURE.

The references to the Mausoleum in ancient literature, so far as still extant, are well known, if not always well understood ; nor is it in my power to cite any descriptions of it which have hitherto escaped notice. The following Greek and Latin writers, named here in approximate chronological order, mention it with more or less of admiration : Vitruvius, Hyginus, Strabo, Pliny the Elder, Martial, Aulus Gellius, Pausanias, Lucian, Cassiodorus, and Vibius Sequester.\*

\* There was a description of the Mausoleum in the treatise of Philo of Byzantium, entitled *De septem Mundi Miraculis*, which is said by Choiseul-Gouffier (*Voyage Pitt. de la Grèce*, tome i. p. 158) to have been full and minute ; but as the portion of Philo's treatise which contained this description has long been lost, it can be merely on presumption that Choiseul-Gouffier characterises it as he does.

Of these Strabo, Aulus Gellius, Pausanias, and Cassiodorus speak in laudatory, but only general and indefinite, terms of the size of the building, the splendour of its decorations, and its celebrity as one of the Seven Wonders of the World. Lucian adds to these praises that of costly material, and in a satirical vein, which recalls the well-known epitaph of Dr. Evans on Sir John Vanbrugh, banters the shade of Mausolus for the heavy weight which lay upon his corpse. None of these five writers, however, throws any real light on the question before us, and none of them, therefore, need detain us further at present.

Vitruvius gives more definite information, useful for some purposes, but, unfortunately, not for our present one, the determination, namely, of the building's architectural form. In his Second Book, *cap.* viii. 37, he describes the topography of Halicarnassus and the position of its chief buildings, including the Mausoleum, which, like the last-mentioned writers, he names as among the *Septem Miracula*. But this passage, though of service to Sir Charles Newton in fixing the site for his explorations, determines nothing as to the architecture of the monument. In another place, *lib.* vii. *præf.* 8, he gives the names of the two architects who built the Mausoleum and who also wrote a treatise upon it, as well as the names of the sculptors who decorated it, in the following words: "De Mausoleo [scripserunt] Satyrus et Phyteus; quibus vere felicitas summum maximumque contulit munus . . . Namque singulis frontibus singuli artifices sumpserunt certatim partes ad ornandum et probandum, Leochares, Bryaxis, Scopas, Praxiteles, nonnulli etiam putant Timotheum; quorum artis eminens excellentia coegit ad septem spectaculorum ejus operis pervenire famam." Here again, however, we find no distinct statement of the form of the building. Certain questions suggested by the mention of one of its two architects may be more appropriately considered at a later stage of this inquiry.

Contemporary with Vitruvius was C. Julius Hyginus the grammarian, who was surnamed "Polyhistor," according to Suetonius, for his archæological knowledge, and is commended by St. Jerome for his distinguished learning. But the two extant works which bear his name are so devoid of the literary merits to be expected in one who, besides being the subject of these encomiums, was Librarian of the Palace under Augustus, that the best critics regard them either as mere compilations from his writings made by an incompetent hand, or as the compositions of some other Hyginus living in a later and less scholarly age. The following statement therefore, occurring in the *Fabularum Liber* (*fab.* 223) has generally been accepted with hesitation, notwithstanding its apparent exactness:



"Monimentum regis Mausoli, lapidibus lychnicis, altum pedes LXXX., circuitu pedes MCCCXL." The word "lychnicis" is evidently to be understood as *Parian*, since Pliny<sup>a</sup> says that the white marble of Paros was called "lychnitis." The circuit of 1,340 feet has by common consent been taken as that of the *peribolus*, or enclosed ground around the monument. The boundary wall of this ground was traced by the explorers on the north side for 337 English feet; so that, if the enclosure was precisely square, its circuit would have extended to 1,348 English feet, a dimension which, if turned into Greek measures, is only a few feet less, or if turned into Roman measures, not many feet more, than that given by Hyginus. This coincidence, which is certainly curious, is thought by Herr Petersen to entitle the other statement of Hyginus, which records the height of the building, to greater deference than it has hitherto received. The figure named for the height, 80 feet, seems, *primâ facie*, at variance with the description of Pliny to be presently quoted, in which the height is given as 140 feet. Sir Charles Newton and Mr. Pullan, thinking the two statements quite incompatible, make no attempt to reconcile or explain them, but at once dismiss that of Hyginus, as the inferior authority, from further consideration. Mr. Fergusson, not to be thus beaten, has discovered a solution of the discrepancy which is at least ingenious. On the ground "that the text of Hyginus" (according to him) "is avowedly corrupt," he suggests that for *pedes* we might read *cubitos* or *cubita*; and then, assuming that the cubit mentioned by any author in connection with the Mausoleum would mean the Babylonian cubit of 21 inches, he points out that 80 of such cubits would correspond exactly with the 140 feet of Pliny. Such an explanation, if admissible, would not merely dispose of the variation between the two writers, but would form a strong argument for the theory put forward, though not positively affirmed, by Mr. Fergusson as to the measures in use at Halicarnassus. But as no manuscript of Hyginus gives any other reading than *pedes*, the substitution of *cubitos* seems to me, if I may use such a phrase, not within the rules of the game; at any rate, not within those rules by which I shall hold myself bound in endeavouring to meet the acknowledged difficulties of the most genuine ancient accounts.

It will be convenient to take Martial next, reserving Pliny, though a somewhat earlier writer, to the last, as his description of the monument requires a longer and more laborious examination.

<sup>a</sup> Lib. xxxvi. cap. v.



Martial's words are as follow :

*"Aere nec vacuo pendentia Mausolea*

*Laudibus immodicis Cares in astra ferant."*

*De Spectaculis, Epig. 1.*

Here we have a phrase not merely laudatory, like so many in the writers already named, which I have passed over as of little or no value for our purpose, but essentially descriptive. It would be a great error to treat the language of poetry in such a passage as having no definite meaning. Truth of description is as essential in poetry as in prose. It differs only in its form of expression. Descriptive prose presents the mechanical facts, visible, tangible, measurable; descriptive poetry the image which those facts collectively, and often unconsciously, produce in the mind. The one gives an objective delineation, the other a subjective. The latter expresses character rather than actual form; and for this purpose it often, as here, employs metaphorical rather than literal phraseology. But it is not the less true, when rightly read. We may be as certain that the predominant character of the Mausoleum as an architectural monument is truly conveyed by the words "hanging in empty air," as that its length, height, and perimeter are correctly expressed by the measurements recorded in Pliny. What then is the predominant character implied in Martial's words? Clearly, they cannot be disposed of as referring merely to the exceptional height of the building. The great pyramid of Ghizeh is more than three times the height of the Mausoleum; yet to describe it as "hanging in empty air" would be little short of ridiculous. Nor can the words refer even to any aerial elevation of the site of the building. The Parthenon on the Athenian Acropolis was more loftily placed than the Mausoleum; yet no one acquainted with that edifice would describe it as "hanging in the air." The only reasonable interpretation of the words surely is, that they describe some remarkable peculiarity of structure, and the question for us is, what that peculiarity was. Fortunately, we are not without a key furnished by Martial himself to his use of the word *pendentia*. For in his Second Book of *Epigrams* he says of Selius :

*"Inde petit centum pendentia tecta columnis,*

*Illinc Pompeii dona, nemusque duplex."*

*Epig. 14.*

Now, whatever may have been the particular building referred to in the first of these lines, we may safely assert that its roof did not "hang" from its hundred columns, but lay securely on the top of them. There is in fact little doubt that the building intended was a colonnade or ambulatory adjoining the

Theatre of Pompey at Rome, and running out at right angles to it, having two parallel rows of columns, fifty in each row. For upon a fragment of the ancient marble Plan of Rome (Fig 1), now in the Capitoline Museum, this colonnade is inserted, with the word *hecatostylum*, somewhat mutilated, at its side.\* The building itself, which was designed as a promenade, such as was frequently attached to Roman theatres, was roofed above, and sheltered on one side by a wall with *exedrae* in it, but was entirely open on the other side, so that both rows of columns, with the passages beside them, were seen from without. Obviously, then, the explanation of the word *pendentia* in this passage is to be found in the many intercolumnar spaces through which the spectator beheld the ceiling, poised, as it were, overhead. If the roof of the building referred to had rested altogether on continuous walls instead of on open colonnades, no poetic licence would have justified Martial's suggestion of its "hanging." But as it rested as much, or in fact more, over spaces as over columns, such a metaphor is felt to be not unfitting. Apply this to the Mausoleum; and the natural conclusion is, that by the words "hanging in empty air" the poet meant to convey, that the one characteristic of the building which impressed the imagination of the Carians was that its roof, or the architectural covering which served as a roof, rested, like the *hecatostylum*, not upon continuous walls, but chiefly or altogether upon columns, pilasters, or isolated piers, round and through which the air circulated freely, so that the whole seemed in a manner suspended from above, rather than supported from below. How this peculiar openness of structure was in fact realised in the Halicarnassian monument will be considered hereafter. For the present it suffices to mark what was the predominant and distinctive character of that monument, as indicated by one of our chief literary guides.

Now, of all the restorations of the Mausoleum which have yet been published the one which most fully realizes the description of Martial is the design of the



Fig. 1. Fragment of the *Pianta Capitolina*.

\* Luigi Canina, *Architettura Antica*, sezione iii. L' *Architettura Romana* (Rome, 1830-40), Pl. ci. from which the plan in the text is taken.

late Professor Cockerell,<sup>a</sup> which was somewhat modified and certainly improved by Mr. Watkiss Lloyd,<sup>b</sup> and more fully elaborated by Mr. Edward Falkener in his interesting article on the subject brought out in 1851.<sup>c</sup> The peculiarity of

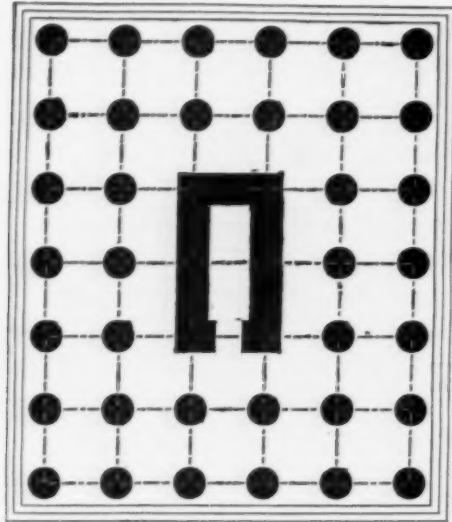


Fig. 2. Plan of Mr. Falkener's restoration.

this design was that the pyramidal roof rested upon a peristyle 63 feet long by  $52\frac{1}{2}$  feet wide, showing the thirty-six columns mentioned by Pliny arranged dipterally, twenty-two in the outer row and fourteen in the inner, with only a very small *cella* in the centre, so that the whole area, if cut up into thirty squares, contained twenty-eight open spaces to only two solid ones. (See plan, Fig. 2.) The Carians might without much hyperbole have lauded such a construction as a quasi-meteoric prodigy. But unfortunately the result of Sir Charles Newton's excavations proved fatal to the dipteral theory; for the remains discovered of the actual roof involved necessarily an

enlargement of its area to an extent in which it could not be safely supported by a peristyle of only twenty-two columns in the outer and fourteen in the inner row. This scheme, in consequence, had to be abandoned even by its authors.

On the other hand, the restoration which is most incompatible with the poet's language is that which, though bearing the stamp of Sir Charles Newton's authority, may be more correctly entitled Mr. Pullan's (Fig. 3). In this scheme the monument consists of a basement and superstructure of nearly equal height. The basement, which in cubical dimensions includes considerably more than half the building, is an unbroken rectangular block, 65 feet high, 119 feet long, and  $88\frac{1}{2}$  feet wide, certainly in itself a stupendous pile of inarticulate masonry. Nor does the superstructure, or ornamental story, show any unusual lightness. Around the core, or

<sup>a</sup> Described in the *Classical Museum*, v. 193-6, in a letter from Mr. Cockerell published in an Article on the "Sculptures of Halicarnassus," which was written by Sir Charles Newton some years before his discoveries at Budrum. It is engraved in the *Museum of Classical Antiquities*, i. 164.

<sup>b</sup> *Archæologische Zeitung*, iii. 81.

<sup>c</sup> *Museum of Classical Antiquities*, i. 157.

so-called *cella*, which is constructed internally upon the principles of the prehistoric chambers of Mycenæ and Orchomenus, and may boast of a similar Titanic strength, runs a peristyle which presents to the eye no greater openness or

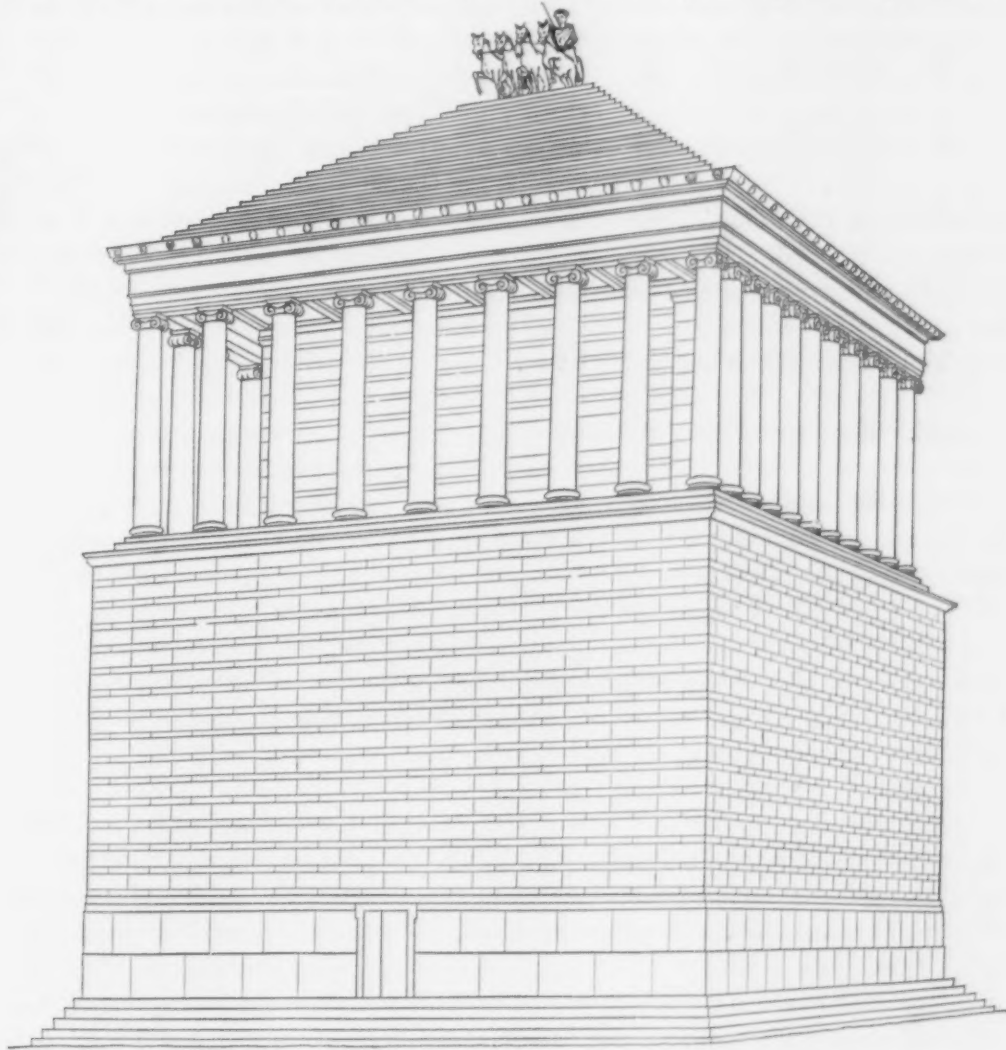


Fig. 3. Mr. Pullan's Restoration of the Mausoleum.

novelty than is to be found in every peripteral temple. Far less aerial in construction would even the upper story have been than a building at Rome which must have been most familiar to Martial, having been burnt and rebuilt in his lifetime,

and being probably within sight, and certainly within ten minutes' walk, of his house on the Quirinal, the Temple of Jupiter Capitolinus. Taking Mr. Pullan's design in its entirety, basement and superstructure together, it may be doubted whether there could be found in the whole range of Greek architecture a work so remarkable for colossal massiveness and solidity. If such had really been the form of the Mausoleum, the vaingloriousness of the Carians would more naturally have boasted that it was evolved out of the rock than suspended from the skies.

Mr. Fergusson has shown himself more justly sensible of the importance of Martial's words. Whilst adopting a design for the superstructure not essentially differing from Mr. Pullan's, he has substituted for the solid basement a kind of *cryptoporticus*, or diaphanous groundstory, the ceiling of which is supported partly by an outer range of detached piers, forming what he terms a "peristele," and partly by inner rows of piers and columns, arranged so as to give a clear view through this part of the building (Fig. 4). The required characteristics, as represented by the poet, the "pendant edifice," the "empty air," are here undoubtedly attained. But they are attained only by applying to the lower story a system of construction which ordinarily belongs to the upper; and this is open to objection both on archæological and artistic grounds. For, on the one hand, no precedent for such a construction is to be found amongst the sepulchral monuments of antiquity. And, on the other, the imposition of a lofty superstructure, enclosing within its peristyle a walled chamber, or *cella*, and surmounted by an exceptionally heavy roof, upon a basement perforated *à jour*, so that the solids are built over the voids, and the principal story of the monument appears to rest upon stilts, would not, as it seems to me, be compatible with that sense of structural stability which is essential to repose, and which was never wanting in pure Greek art.

Before passing to Pliny it is necessary to refer, at least cursorily, to a passage in an author of uncertain but evidently late date, Vibius Sequester, the geographer. In the section of his Glossary entitled *De Gentibus*,<sup>a</sup> he says: "Mausoleum in Cariâ altum pedum CLXXX, in circuitu pedum cccc; ibi est sepulchrum regis lapide lychnite," a statement which resembles that of Hyginus in definiteness and somewhat in form, but conflicts with it in the dimensions given. Nothing whatever is known of the author except from his work; and this proves him, in the opinion even of his editor Hesselius, to have been a man "of no great judgment or ability, though not absolutely ignorant." To attempt to reconcile the testimony of Sequester with that of Hyginus, or to determine the relative

<sup>a</sup> P. 37 (8vo. Strasb. 1778).



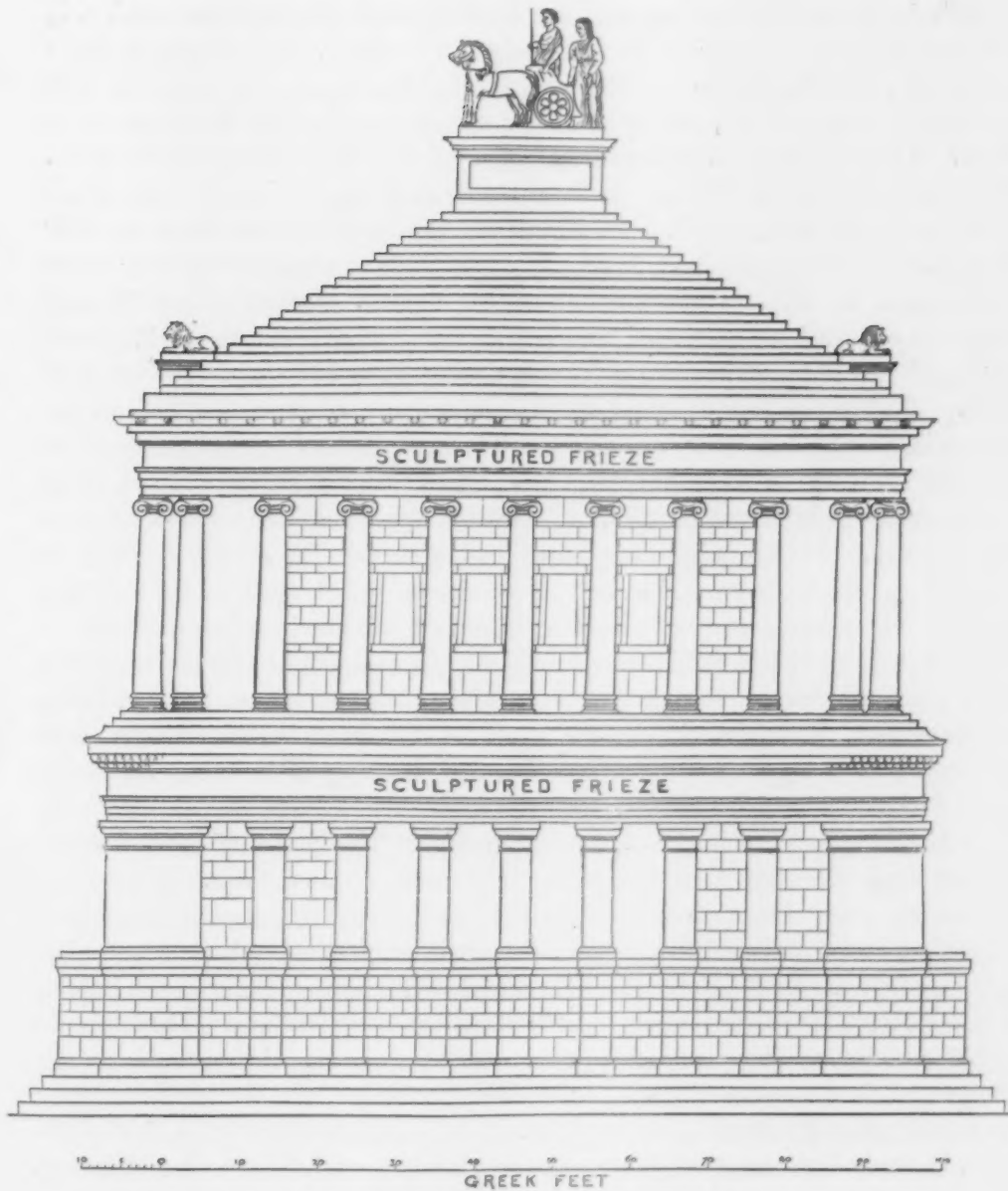


Fig. 4. Mr. Fergusson's Restoration of the side of the Mausoleum.

weight of each, if irreconcilable, would be an unprofitable task. Having therefore cited the statements of both writers, such as they are, we will, without further discussing them, proceed finally to a document of higher rank.



This is the well-known passage in Pliny's Natural History, *lib. xxxvi. c. 5*, the most important by far of all the ancient authorities. Unfortunately there are many variations in the published texts of this passage, so that the first question to be determined, and by no means an easy one, is, what did Pliny really write? I have myself never personally inspected any of the many extant MSS. of the author (of which Caylus<sup>a</sup> professes to have collated thirty-seven); nor, if I had inspected them, should I be competent to throw any new light on their respective claims to authority. I can only venture to comment, and that with much diffidence, on the several versions as they appear in print. Amongst these the most generally accepted are the versions given in the two editions of the "Natural History" published by Julius Sillig, one dating from 1831-6, the other from 1851. During the production of the first of these editions a new MS. of the thirty-sixth and some other books of the "Natural History" was discovered by Ludwig von Jahn in the library at Bamberg, written, in Jahn's opinion, by an Italian scribe of the tenth century, but attributed by others to a German monk of the eleventh. On becoming fully acquainted with this MS., Sillig found it so superior to all others on which he had previously relied, both in general composition and more particularly in the filling up of previous *lacunæ*, that he adopted it as the basis of his second edition. In so doing he was led to alter in three places the text of the paragraph describing the Mausoleum, as given in his earlier edition. The corrections he made will be best shown by printing the whole paragraph as it stood in the first edition, and marking with italics the words altered or added to in the second.

"Scopas habuit æmulos eadem ætate Bryaxin et Timotheum et Leocharem, de quibus simul dicendum est, quoniam pariter cælavere Mausoleum. Sepulchrum hoc est ab uxore Artemisia factum Mausolo Cariæ regulo, qui obiit Olympiadis centesimæ sextæ anno secundo. Opus id ut esset inter septem miracula ii maxime artifices fecere. Patet ab Austro et Septentrione sexagenos ternos pedes, brevius a frontibus, toto circuitu pedes *ccccxi*; attollitur in altitudinem viginti quinque cubitis; cingitur columnis triginta sex. *Pteron vocavere*. Ab Oriente cælavit Scopas, a Septentrione Bryaxis, a Meridie Timotheus, ab Occasu Leochares; priusque quam peragerint, regina obiit. Non tamen recesserunt nisi absoluto jam, id gloriæ ipsorum artisque monumentum judicantes; hodieque certant manus. Accessit et quintus artifex. Namque supra Pteron pyramis altitudine inferiorem *æquavit*, viginti quatuor gradibus in metæ cacumen se contrahens. In summo est

<sup>a</sup> *Mem. de Litt. tirés des Registres de l'Acad. des Inscr. et Belles Lettres*, xxvi. 321 (1753).

quadriga marmorea quam fecit Pythis. Hæc adjecta centum quadraginta pedum altitudine totum opus includit."

The following are the alterations made in the second edition :

1. For ccccxī is substituted ccccxix.
2. After *Pteron vocavere* is inserted *circumitum*.
3. For *æquavit* is substituted *æquat*.

For the first and third of these corrections Sillig has no authority but the Bamberg MS. For the second he has, besides the Bamberg MS., the support of several others, referred to in his marginal notes. Modern commentators generally, prior to Sir C. Newton, have adopted the text of Sillig's first edition, which is in fact the same which had been given in most, or at any rate the best, of the preceding editions of Pliny. Sir C. Newton, however, writing after the publication of Sillig's second edition, has made it the foundation of his comments on the whole paragraph, though, for reasons which he gives, he has declined to be bound by its text throughout. He has accepted the second and third of Sillig's emendations, but rejected the first. Mr. Fergusson, though writing at a still later date, has taken no notice of the variations in the two editions, or of the reasons on which they are grounded, seeming almost to have been ignorant of the changes Sillig had made. He has printed a text which practically adopts Sillig's second emendation, but rejects the first and third, and in all other respects corresponds with Sillig's first edition.

Insignificant as these verbal differences may at first sight appear, they in reality involve architectural conditions on which the true scheme of restoration may not improbably be found largely to depend. I shall, therefore, make no apology for examining *in limine* what I may call the several editorial or literary reasons for or against each reading ; and this I shall do, as far as I can, without bias, that is to say, without regard to the bearing of such readings upon any special theory of restoration to be hereafter considered, though not, of course, without regard to those primary architectural facts which underlie the whole question, and affect all theories alike. And here a certain difference is to be noted between our position and Sillig's. He seems to me, though a learned and careful editor, to have felt himself to be an editor only, and to have therefore been influenced by a not unnatural wish to avoid involving himself in the meshes of the "restoration" question. With that view he seems to have adopted a somewhat summary method of determining between the several variations of the MSS. in this paragraph. His experience in other passages of Pliny having satisfied him that the Bamberg codex was, on the whole, the most trustworthy of

all that are known, he resolved to adhere to it unreservedly, through rough places and smooth, without regarding any considerations lying outside the text, which might possibly involve him in architectural speculations. But for us, who are engaged in the architectural inquiry, it is impossible to dispose of all the textual variations in so simple a way. We cannot but feel bound, in dealing with a reading found in any received manuscript, to inquire not solely into the general literary repute of that manuscript as compared with others, but also into the inherent probability or improbability of the reading itself, as tested by any scientific criticism which may, without prejudice to the most judicial neutrality, be applicable to such a subject. Now there is one characteristic of all the readings borrowed by Sillig from the Bamberg codex. They are all *primâ facie* plausible, and two of them tend to the removal or mitigation of supposed obscurities or inconsistencies in Pliny's grammar. The monkish transcriber of the Bamberg codex, or else perhaps the transcriber of that which is technically called its *archetype*, was evidently above the average in learning and intelligence. But, paradoxical as it may sound, intelligence itself is not without its dangers in such an operation as copying, since it furnishes a constant temptation to solve difficulties in the text by ingenuity rather than to transcribe mechanically what the copyist does not himself understand. The result is, that we are here presented with a version which reads easily enough, but is not perhaps on that account more likely to be really authentic than a version which frankly retains some discrepancies or obscurities requiring to be reconciled or cleared up. Let us examine the three disputed passages separately.

1. In the first passage the question is, whether the *totus circuitus* was given by Pliny at 411, or 440 feet. Now no MS. cited either by Sillig or any other editor gives any other figure than 411, except the Bamberg codex, which gives 440. Surely, this is a case where, in deciding between the several copyists, numbers must have more weight than even superior intelligence. Suppose, for illustration, it were a question of the amount of a legacy bequeathed in a lost but still valid will, like that of the first Lord St. Leonard's. Suppose, that out of a dozen persons who had each transcribed the will before it was lost, writing at different times and independently of each other, eleven had written down the amount as £3,000, but the twelfth had written it as £2,000. Suppose, at the same time, that the copy of the twelfth transcriber had in other parts of the will been found more grammatical, more consistent, more apparently authentic, than any of the other copies. Still, in a mere question of the correctness of a transcribed figure, would not any sensible judge prefer the authority of the eleven independent and unanimous

copyists to that of the single dissentient, however superior his intelligence might have been found elsewhere?

Again, let us look to the figures themselves, and consider to which of the two readings any inaccuracy in the copyist would more naturally incline. Sillig, in his preface to his second edition, states his opinion that all the known codices of the Natural History were derived, directly or indirectly, from one archetype, written in uncial characters, and that copies of this were made, from which the now extant codices were transcribed. If this be so, it is probable that the copy from which the Bamberg codex was made would have been uncial, like the archetype. Now the uncial character is, in Sillig's opinion (as he illustrates by several examples in his preface), very liable to misreading in the copying of letters with an upright stroke, such as I, L, or T. Of course, if the number mentioned in the archetypal codex of Pliny had been written in words, it is very unlikely that any confusion would have arisen between words so different as *undecim* and *quadraginta*. But if, as the actual confusion seems to prove, it was written in Roman numerals, the difference between the two readings would be merely that between ccccxī and (according to a form of notation common in ancient as well as modern times) ccccxl. That is, the question would simply be, whether the last letter in the archetype had or had not a horizontal bar at the bottom. Now suppose that letter to have been somehow blurred or defaced in the copy from which the Bamberg codex was immediately taken. The scribe, in deciding how to render it, had not the knowledge which we have, that all the other codices gave the letter as I. Driven therefore to his own speculations, he might not unnaturally argue that, as Pliny's description seems to imply that the Mausoleum was a quadrilateral building, the figure 440, which is not only a multiple of 4, but which might also be so divided as to suit either an oblong or square ground plan, would more probably express the building's perimeter than 411, which, without fractional subdivision, would fulfil neither of these conditions. And if this argument satisfied his mind, he might resolve to obviate any future doubt as to the reading of the last letter by altering the form of notation to one equally appropriate and less liable to misreading, the ccccxxxx of the Bamberg codex. But whether or not this explanation, which of course is purely hypothetical, had any foundation in fact, the general balance of evidence from all the MSS. collectively appears to me to be in favour of the reading 411, and to this accordingly I shall adhere.

2. The second question is, whether the word *circumitum* should be inserted after *Pteron vocavere*. Here the MSS. do not speak with decided voice. Some of good character besides that of Bamberg, such as the Vossian, the Riccardian, the

Toletan, and the Parisian *d*, insert the word. Others omit it; and these last must, in Sillig's opinion at the date of his first edition, have carried the balance of authority, since he then excluded the word from his text. But the discovery of the Bamberg codex led him, as in the preceding case, to alter the reading. Let us, however, before deciding whether or not to follow him, consider, as before, the inherent probability or improbability of the emendation. Supposing then that Pliny wrote simply *Pteron vocavere*, it is not improbable that a scholiast with a smattering of architectural knowledge would think he elucidated the meaning by writing *circumitum* in the margin of his MS., and a subsequent transcriber, thinking the sentence deficient with only two words, would transfer the third word from the margin to the text. But supposing, on the other hand, that Pliny wrote *Pteron vocavere circumitum*, no corresponding motive would have tempted any transcriber to omit the last word. Nothing but carelessness could explain his default; and this carelessness must be ascribed either to the writer of the archetypal codex, or concurrently to a large number of transcribers of that codex, working independently of each other; which last is a very difficult supposition. But what after all would the sentence of three words tell us? "They called the surrounding ambulatory (that is the peristyle) a *pteron*." Of course they did. Every tyro in architectural nomenclature knew, after the publication of Vitruvius, that the colonnade and ambulatory surrounding a building were together termed a *pteron*, for on this word the classification of temples as apteral, peripteral, monopteral, dipteral, etc., was founded. When Pliny could only afford half a dozen lines to the whole description of the architecture of the Mausoleum, is it likely that he would waste a sentence, even of only three words, on such a truism as this? But strike out the word *circumitum* and let the sentence read "they called it the *pteron*." It is then at once seen that the writer is not using the word *pteron* in its every-day sense, but telling us that they (that is, the architects and other artists) applied the word in an exceptional sense to a certain part of the building of peculiar architectural construction, which is here being described.\* What that part of the building was, is to be collected from the preceding sentence, reaching from *Patet* to *sex*. "It," he says, "extends" so much; "it is raised" so much; "it is surrounded," etc.; and then he adds, "they called it the *pteron*." Now what does he mean by "it"? No nominative is given in the sentence itself. Nor is it to be inferred from the preceding part of the paragraph. It is not

\* It is to be noted that the very same form of expression is used by Pliny, with the same emphatic terseness, in describing a part of the great Egyptian labyrinth, *Pteron appellat*. *Lib. xxxvi. c. 13.*



*Mausoleum*, for that Pliny afterwards says was 140 feet high, whilst what he is here describing was only 25 cubits. It is not *sepulchrum*, for that either is, in a wider sense, synonymous with *Mausoleum*, and therefore equally inadmissible, or else, in a narrower sense, means the actual place of burial, and this Sir Charles Newton's researches have shewn to have been merely a subterranean chamber. The true nominative then is the understood thing which he presently says they called the *pteron*. It is the whole of that part of the building which alone he considers of sufficient importance to require its dimensions, and the number of its surrounding columns, to be stated in detail; in other words, it is the principal story. If any doubt remains as to this interpretation, it may be dispelled by what Pliny afterwards says of the surmounting pyramid, that it rose *supra pteron*; for manifestly the pyramid did not rise over the peristyle, or *circumitus*, but over the whole story which the peristyle surrounded. To this story then I shall henceforth apply exclusively the title of *pteron*. The result, as regards the text, is, that the word *circumitum* must in my opinion be rejected as an interpolation.

3. Lastly, are we, in the description of the pyramid, to read *xquavit* with Sillig's first edition, or *xquat* with his second? Here again the Bamberg codex, which substitutes the present for the præterite tense, stands alone; and alone therefore among the published editions of Pliny stands this second of Sillig's, which adopts the newly discovered text. But here likewise, as with Sillig's first emendation, I would not rely solely on numbers in opposition to the judgment of so eminent a critic, but would consider to which side the intrinsic probability of the case, judged merely on literary grounds, seems to incline. Throughout the description of the Mausoleum, setting aside the one word now in question, Pliny uses uniformly verbs in the present tense, *patet*, *attollitur*, *cingitur*, *est*, *includit*. In describing the acts of men he uses the præterite, *fecere*, *vocavere*, *cælavit*, *recesserunt*, *accessit*, *fecit*. To substitute *xquat* for *xquavit*, therefore, in the description of the building, is to bring the discordant verb into conformity with its fellows. But what is the real bearing of this *primâ facie* improvement, which we owe to the Bamberg transcriber, on the question of authenticity? Is not the very conformity thereby obtained, when fairly considered, a ground of distrust rather than of confidence? Does not the convenient removal of a difficulty form a somewhat suspicious recommendation of the credibility of any evidence upon a matter of fact? And here we are dealing merely with a matter of fact, namely, which of two words did Pliny use? On such a question I venture to affirm, however paradoxically, that the apparently improbable word, if only equally well attested, is more likely to be authentic than the apparently probable. If Pliny



really wrote *æquat*, no transcriber would have thought of turning it into *æquavit*. But if he wrote *æquavit*, and especially if the last syllable of the word chanced to be imperfectly legible in the copy before the transcriber, that transcriber might naturally prefer to adopt the tense which he found in all the other verbs used in the same connection, and so put it down as *æquat*. On the twofold ground therefore, firstly, of the numerical preponderance in manuscript authority, and secondly, of the real probability which is in such cases the offspring of apparent improbability, I accept the reading of Sillig's first edition rather than of his second, and retain *æquavit*.

Thus the conclusions I have arrived at on each of the three passages in question are these: 1. In common with Sir Charles Newton and Mr. Fergusson, I retain the original reading of ccccxl., rather than adopt the new one of ccccxxxx., which is found in the Bamberg codex alone. 2. In opposition to Sir C. Newton and Mr. Fergusson, but in accordance with most of the best esteemed codices, though not with the Bambergensian, I reject the word *circum-itus* as a gloss. 3. In common with Mr. Fergusson, but in opposition to Sir C. Newton, I retain the long undisputed reading of *æquavit* in preference to *æquat*, which the Bamberg codex alone offers as a substitute for it. Thus I adhere throughout to the first edition of Sillig, and decline all the supposed improvements of the second, a conclusion which fortunately places me on the same practical starting ground as nine-tenths of preceding restorers.

Before quitting, however, the subject of variations in the text, it is necessary to notice an emendation adopted by Sir Charles Newton in the sentence describing the pyramid. In that sentence he recommends the substitution of *altitudinem* for *altitudine*; and, acting at once on this recommendation, he has, with Mr. Pullan, determined from the noun in its altered case the heights of the principal divisions of the building in their joint scheme of restoration.<sup>a</sup> The emendation is not absolutely new, having before been suggested by Jahn and some others as a possible improvement of the text, though without claiming for it any authority.<sup>b</sup> But unfortunately this reading is not to be found in any trustworthy manuscript, and it has accordingly not been admitted into Sillig's or, as far as I know, any other modern edition of Pliny. Following Sir Charles Newton, Herr Petersen has silently adopted this convenient emendation,<sup>c</sup> his motive of course being the same as his predecessor's, to get rid of the necessity

<sup>a</sup> Newton, *A History of Discoveries at Halicarnassus, etc.*, ii. 191.

<sup>b</sup> *Berichte der Leips. Gesellsch.*, 1850, p. 126.

<sup>c</sup> *Das Mausoleum, etc.*, 12.

imposed by the laws of grammar for interpreting the really authorised text in a manner incompatible with any scheme of restoration which he could devise. The principles, however, on which the present inquiry is conducted do not allow me to entertain such a solution of any difficulties, real or supposed, in the literal acceptance of the best established text. To be a restorer first, and a critic afterwards, would be an inversion of the functions of scholarly investigation to which Sir Charles Newton, I am persuaded, would not deliberately have assented. Rather, I think, he would have acceded to my view, that it is our duty, as expositors of Pliny, to adapt our interpretation to the most surely authenticated text, not the text to our interpretation, and that if we cannot fairly reconcile the two, we had better abandon the restoration altogether.

Now, unwilling as I am to throw any slight upon writers who have generally been far superior to myself in learning and literary experience, the necessity of truth, as well as thoroughness of investigation, compels me not to conceal my opinion that, in drawing their conclusions from Pliny's description, none of the critics who are at the same time restorers of the Mausoleum have accepted his authority frankly, and few, if any, have even translated his words faithfully. Those who offer an English version of the whole paragraph have generally, whether to evade difficulties, or merely to give an ornamental turn to their language, presented us with a paraphrase rather than a translation. Sir Charles Newton, indeed, opens his commentary upon it with a declaration to which I cordially and unreservedly assent. "A more consistent result," he says, "can be obtained by accepting Pliny's account literally than by any process of conjectural emendation or forced construction." But, unfortunately, he has found himself unable to adhere in practice to the principle thus so justly laid down. Not merely does he proceed, only two pages later, to recommend and practically act upon the convenient "conjectural emendation" which has just been noticed, but in the chapter contributed by Mr. Pullan, he (Sir Charles Newton) publishes Pliny's paragraph, both in Latin, with his own initials attached, and also in an English translation, edited at least if not composed by himself, which is far from "literal," and by no means scrupulously accurate in some critical phrases.<sup>a</sup> The only safe course, I venture to say, where the meaning of any sentence in an ancient author is doubtful, is to abjure all circumlocution and ornamentation, and

<sup>a</sup> Thus the words *Pteron vocavere circumitum* are rendered, "The part surrounding the tomb was called the Pteron," though the writer's own discoveries had shown that the "tomb" was below the level of the ground, and the "Pteron," as he himself understands it, was more than sixty feet above.

translate the sentence literally, if possible, word for word, from beginning to end, like a plodding schoolboy. This humbler method I am content to adopt, and accordingly submit the following plain, however inelegant, English version :

"Scopas had as rivals in the same age Bryaxis and Timotheus and Leochares, of whom it is right to speak together, since they equally adorned with sculpture the Mausoleum. This is the sepulchre made by his wife Artemisia for Mausolus, ruler of Caria, who died in the second year of the hundred and sixth Olympiad. That that work should rank among the seven Wonders [*i.e.* of the world] those artists mainly brought about. It extends on the South and North to sixty-three feet, to a shorter space on the fronts, in its entire circuit to four hundred and eleven feet; it rises to its height by twenty-five cubits; it is surrounded by thirty-six columns. They called it the Pteron. On the East Scopas sculptured it, on the North Bryaxis, on the South Timotheus, on the West Leochares; and before they had completed it, the Queen died. They did not however withdraw, unless when it was quite finished, judging it to be a monument to the glory of themselves and of Art; and to this day their hands appear in competition. There came in also a fifth artist. For above the Pteron a pyramid equalled in height the one below, contracting itself by twenty-four steps into the summit of a meta. On the top is the marble quadriga which Pythis made. This having been added includes the whole work in a height of one hundred and forty feet."

It has been suggested by Sir Charles Newton that Pliny, in drawing up this description, was making extracts from the treatise of Satyrus and Phyteus, who are recorded by Vitruvius as the architects of the building, a treatise which was probably still extant in Pliny's day. It has thence been argued by him, that every statement actually made by Pliny must be accepted as authoritative, and his description treated as strictly correct as far as it goes, though unfortunately that is not far enough to convey a full and clear idea of the building intended. This is the theory of interpretation which I likewise adopt. I regard the description generally like a collection of authentic fragments of a broken statue, whose disjointed limbs must be reunited just as we find them wherever they will fit, and pieced out by restoration wherever they leave a void. But what limbs do the fragments represent, and where and how great are the blanks between them? What portion of the original treatise has Pliny reproduced, and what has he omitted? This is the crucial question, which the several restorers answer differently. Let us see how far we can get towards the true answer simply by analysing Pliny's description somewhat more closely than has hitherto been done, following merely the laws of logic and grammar, without for the

present calling in any collateral means of interpretation. What then does Pliny say?

1. Firstly, he says: *Patet ab Austro et Septentrione sexagenos ternos pedes*. The words are simple, and the only question is, to what part of the building he meant them to apply. There is nothing, however, in logic or grammar, to assist us in answering that question, and it must therefore remain in suspense till we can call in aid from a different quarter.

2. Next, he says: *brevius (i.e. patet brevius) a frontibus*. This, it is unanimously agreed, must refer to the two faces of the building not before named, that is, the east and west. But why does he say *a frontibus*, instead of *ab Oriente et Occasu*? Clearly, because he wished us to understand that the fronts, using the word in an emphatic and distinctive sense, were on those faces of the building which he is now speaking of, namely, the east and west, and not on the north and south. It was necessary for him to tell us this. The mere direction of these two faces to sunrise and sunset did not of itself imply that they were "fronts," for there was no orientation of sepulchres among the Greeks, as there was generally of temples. Neither did their shortness of dimensions, as compared with the north and south faces, imply it. For if relative shortness alone had implied necessarily the distinction of being fronts, then to tell us that "the building was shorter on the fronts" would have been equivalent to saying that "it was shorter on the shorter faces," an obvious and inane tautology. Besides, so far from relative shortness implying necessarily identity with frontage, the inference from analogy is rather, of the two, the other way. For, as a matter of fact, setting aside ancient temples and modern churches (and the Mausoleum was no more the one than the other), a large, and probably the larger, number of important buildings, when standing alone and not hampered in space, as in streets, have in all ages and countries been longer on the fronts than on the sides. It follows, therefore, that the title of "fronts" must have been given by Pliny to the east and west faces of the building neither on account of their direction nor of their relative shortness. Can we, then, avoid concluding that it was given on account of some distinctive structural feature which marked them out at once to the spectator as being of more architectural importance than the north and south sides? The mere allocation of an entrance door to the east or west would not suffice for this purpose; for, besides that it would not apply to more than one front, the doors of ancient sepulchres were never of striking prominence, and indeed seem sometimes to have been designed to avoid notice rather than to court it. There must, therefore, in all probability, have been some feature of strong

character attached to these faces of the building, which affected its general design; and this would naturally have been found in its principal story, the Pteron. Of all the restorers of the Mausoleum Canina alone seems to have comprehended this necessity. By the introduction of pediments over the colonnades he has given the required structural dignity to the east and west ends, as the legitimate fronts.<sup>a</sup> In what manner I would myself effect the same purpose will be seen under a later head of the present essay.

3. Thirdly, Pliny says: *Toto circuitu pedes quadringentos undecim; attollitur in altitudinem viginti quinque cubitis; cingitur columnis triginta sex.* Here I see nothing to call for verbal or grammatical criticism. As with the words recording the length, the only question is, to what part or parts of the building this description is meant to apply. The exact application which I should give to each specification of cubits and feet, with its respective method of measurement, cannot properly be stated at this stage of the inquiry. The only general conclusion from the passage before us which our present examination suggests is this: that as the length, perimeter, and height mentioned by Pliny are all comprised in the sentence extending from *Patet* to *sex*, and as that sentence, as has already been shown,<sup>b</sup> relates solely to the Pteron, it follows that the dimensions therein given must all refer, somehow or other, to the Pteron, and to no other part of the building. And the same inference applies to the allocation of the thirty-six columns which surrounded it.

4. The next statement which bears on the architectural construction (omitting the passage from *Pteron* to *manus*, which has no relevance to the present question) is *Accessit et quintus artifex.* Here and henceforward every word is of importance. *Accessit*, "there came in," that is, as an additional or supplementary worker. *Et*, "also," a word likewise implying something superadded to what had been said before. *Quintus artifex*, "a fifth artist." Why is this artist distinguished from the other four, Scopas, Bryaxis, Timotheus, and Leochares? Why not named at first with them, as one of *five* who together executed the sculptures, and of whom, therefore, Pliny had to speak jointly (*de quibus simul dicendum est*)? Why also is the part of the building on which he worked not described together with the description of the rest of the building? Why only mentioned later on, after a sentence containing a short episode of history, Artemisia's death, and its effect on the artists engaged? Why again (returning to the beginning of the paragraph) does Pliny call Bryaxis, Timotheus, and Leochares, rivals of Scopas

<sup>a</sup> Luigi Canina, *Architettura Antica, sezione ii. L' Architettura Greca* (Rome, 1834-41), Pl. CLVIII.

<sup>b</sup> *Sup.* pp. 288, 289.



*eadem ætate*, as though to imply that the artist to be thereafter mentioned was not quite "in the same age"? To these questions Pliny himself seems to be intending to reply by beginning the next sentence with the explanatory adverb *Namque*, explaining, that is, how it came about that there was room for a fifth artist's intervention. And how does he explain it? *Namque supra pteron pyramis altitudine inferiorem æquavit*. Note the tense of the verb. Not *æquat*. For the first and only time throughout the description of the building, as distinguished from the description of men's acts, Pliny uses the præterite. He must have meant something by this. Latin is not a loose language, and Pliny is not a loose dealer in words. His diction, habitually concise, and therefore suffering sometimes from the Horatian penalty of obscurity, is always pregnant with meaning, even in cases where that meaning may not be what we now think the wisest. Here his meaning, as most naturally and logically interpreted, is to distinguish between two periods in the construction of the building, the period of Scopas with his three contemporary rivals, and the period of Pythis. To show more clearly what the later artist did, he first describes exactly the form in which he found the pyramid. *Pyramis altitudine inferiorem æquavit, viginti quatuor gradibus in metæ cacumen se contrahens*. That is, he found it a complete pyramid, pointed like a meta, and graduated into twenty-four steps. But he wished to crown it with a quadriga, and this could not be placed on a meta's point. He therefore (as I believe, and will endeavour to prove more particularly hereafter) truncated the pyramid sufficiently to make a platform for his quadriga. Henceforth the pyramid no longer equalled in height the pyramid in the lower part of the building, and no longer comprised so many as twenty-four courses of steps. But on the new and truncated summit or platform thus obtained he placed the quadriga which was still standing in Pliny's day, and which is therefore mentioned by him in the present tense. *In summo est quadriga marmorea, quam fecit Pythis*. This sculptural addition so increased the total height of the monument that Pliny, again using a verb in the present tense (*includit*), gives the whole at 140 feet. And thus the change of tense in *æquavit* from the tense used with the other verbs is not only intelligible, but full of instructive meaning. The reason why, for the first and only time throughout his description of the building, Pliny used the præterite tense is because, for the first and only time, he was mentioning a feature which no longer existed in the same form when he wrote.

5. In this interpretation of the real work of Pythis, the sense of Pliny has been collected from the sum of the whole passage from *accessit* to *includit*. But two phrases occur in that passage which I have reserved for separate notice. One



is the statement, *pyramis altitudine inferiore æquavit*, or, as I have translated it, "the pyramid equalled in height the one below," the word *pyramidem* being constructively implied or understood in the sentence. Sir Charles Newton calls this "a forced construction." But surely in this he is making a confusion between Pliny and his interpreters. Pliny's own phrase may, from its conciseness, be thought obscure; perhaps even it is amenable to the epithet "forced." But given that phrase, the construction here put upon it is not "forced." On the contrary, it is the most, if not the only, grammatical, and therefore natural, construction which the words will admit. The really "forced constructions" are those of my various predecessors, for they require, to help them through, either the perversion of the text by changing an ablative case into an accusative, as is done by Sir Charles Newton, or the assumption which is quietly made by most other Mausoleum restorers, that we should understand a word which is not constructively contained in the sentence, and has therefore no *locus standi* in grammar, such as *partem*, *molem*, or the like.

6. The other phrase remaining for separate notice is: *pyramis in metæ cacumen se contrahens*. Here it is to be noted that Pliny does not compare the



Fig. 5. Three Roman Metæ. (From Smith's Dictionary of Greek and Roman Antiquities, a. v. Circus).

whole pyramid to a meta, but only its contracted summit to the *cacumen* or point of a meta. The form of a Roman meta is familiar to us from coins and bas-reliefs.<sup>a</sup> It is distinctly shown on a well-known terracotta panel in the British Museum, of which an outline is here printed (Fig. 5). It was an elongated cone, and to it therefore Ovid poetically likens the form of the cypress tree with its steep sides and pointed head.<sup>b</sup> To describe a pyramid, whose height was only a quarter of the length and a third of the breadth of its base, as resembling such an object as this, would be little less than absurd. But the *cacumen* of the meta was naturally a mere point, though commonly kept just large enough to carry some small finial ornament; and to this point Pliny compares the apex

of the pyramid arrived at by twenty-four contractions. What then is to be thought of the delineation of this apex, this likeness of a meta point, in either of

<sup>a</sup> Several examples of *metæ* are represented by Canina, *Architettura Romana*, Pl. CXXXVII.-VIII.

<sup>b</sup> *Metas imitata cupressus*. Ovid. *Metam.* lib. x. v. 106.

the forms here reproduced (Fig. 6) from the publications of my three immediate predecessors ?

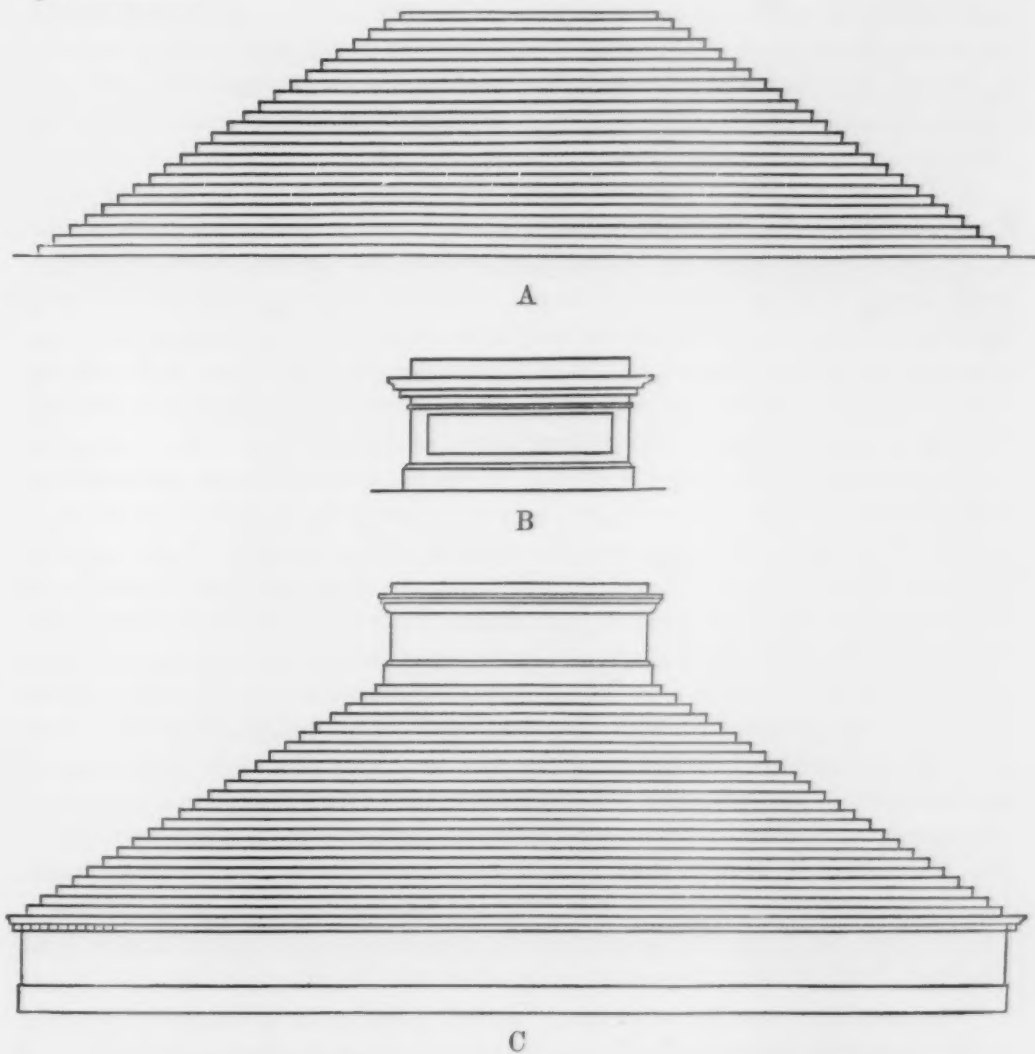


Fig. 6. Three imitations of the summit of a meta : A, as designed by Mr. Pullan ; B, as designed by Mr. Fergusson ; C, as designed by Herr Petersen.

The first of these exhibits Mr. Pullan's pyramid ; the second Mr. Fergusson's pedestal for the quadriga, which he expressly names as the equivalent of the

meta in question ;<sup>a</sup> the third is Herr Petersen's conjoined pyramid and pedestal. The idea that any ancient author familiar, like Pliny, with the Roman circus, would select either a meta, or the *cacumen* of a meta, as the object most nearly resembling any of these three forms, is one which it would be impossible for me to discuss with seriousness. It will, therefore, be more consistent with the respect I feel for each of these learned writers to pass at once to a different question.

7. The last word to be noticed in the paragraph is the proper name Pythis. It has been suggested by Brunn<sup>b</sup> that this artist was probably the same person as the architect Phyteus, or Pythius, or Pitheus, as different editors give the word, who is said by Vitruvius to have, jointly with Satyrus, designed and built the Mausoleum, though his name may have been disguised as Pythis by the looseness of old orthography. This suggestion has been accepted without question by Herr Petersen,<sup>c</sup> and seems to have the approval of Sir Charles Newton.<sup>d</sup> I have already quoted from Vitruvius the passage in which the two architects of the building are mentioned, but have reserved till now any comment which either of their names might involve. Now, if it is implied in Brunn's hypothesis that the quadriga and its platform were included in the original design of the building, the theory here set forth of an alteration of the pyramid by Pythis must fall to the ground, a conclusion which of course I cannot accept. But if it is only meant that Phyteus, or whatever the architect's name may have been, after completing, together with Satyrus, the pyramid in its normal form, may have been dissatisfied with its effect, and may therefore at a later date, when acting alone as sculptor as well as architect, have altered it in the manner here described, I am not concerned, in defence of my own theory, to dispute such a proposition. Indeed, I may myself point out, in favour of this last supposition, that Phyteus is by most writers identified with the Phileus (or Pythius) named by Vitruvius as the architect of the temple of Athene Polias at Priene,<sup>e</sup> which is known from its dedicatory inscription to have been built under Alexander of Macedon from fifteen to twenty years after the Mausoleum.<sup>f</sup> Assuming this

<sup>a</sup> Mr. Fergusson's words are, "This leaves a platform on the summit of twenty Greek feet by sixteen, on which to erect the *pedestal* or *meta*, which is to support the quadriga." *Mausoleum of Halicarnassus Restored*, p. 28.

<sup>b</sup> *Gesch. der Griech. Künstler*, vol. ii. s. 376.

<sup>c</sup> *Das Mausoleum*, 12.

<sup>d</sup> *A History of Discoveries at Halicarnassus, etc.*, ii. 55.

<sup>e</sup> *Vitruvius*, lib. vii. *Præf.*, s. 8.

<sup>f</sup> *Dilettanti Society, Ionian Antiquities*, Pt. iv. p. 23 (Newton) and p. 30 (Pullan).

identification to be correct, Phyteus might naturally enough, whilst employed at a place not far distant from Halicarnassus, have taken the opportunity to revisit and examine his former work with a fresh eye, and might then have observed how he could improve it by adding a sculptural group on its summit. On the other hand I feel bound to note : 1. That no confirmation of Brunn's hypothesis is to be obtained from any historical authority ; for neither as architect and sculptor combined, nor as sculptor alone, is Pythis, or any one of similar name, mentioned by any extant author, except by Pliny in these few words. Brunn indeed draws from this silence an argument against the existence of any such sculptor, except in the person of the architect Phyteus. But as there were heroes before Agamemnon, whose names have passed into obscurity for lack of a commemorating bard, so doubtless there were good artists even in historic times whose record has perished altogether from the mere deficiency of the annals of art ; and fortunate therefore is one whose reality is attested by even a single mention. When we reflect, on the one hand, how innumerable were the statues, and therefore probably how numerous were the sculptors, in the various Greek states, and on the other, how small is the portion of ancient literature which has survived to our times, how brief and cursory are the notices of artists even in Pliny, and how few of those noticed, except the very greatest, are mentioned at all elsewhere, we shall hardly conclude that the fact of being only once named suffices in itself to throw doubt on any sculptor's existence. 2. Neither does Brunn's hypothesis find any confirmation in the words of either of the authors who have handed down to us the disputed name. Vitruvius, after mentioning Satyrus and Phyteus as joint architects and historians of the Mausoleum, remarks simply on their singular good fortune, *quibus vere felicitas summum maximumque contulit munus*, in having the building they had erected and described brought at once into world-wide renown by the admirable works of the sculptors who decorated it.<sup>a</sup> Now, if one of the architects had himself executed the most important group of statuary which adorned the building, Vitruvius would hardly have spoken of his good fortune in obtaining exceptional credit for his architecture through means of a sister art without mentioning how he had himself contributed to that result by his successful achievement in the sister art. Nor do Pliny's words, taken in their straightforward and natural sense, accord any better with Brunn's suggestion. Neither the verb *accessit*, nor the description *quintus artifex*, could have been properly applied by him to one whose architectural design must have preceded

<sup>a</sup> See the passage from Vitruvius cited at p. 276.

all other work, unless in the sense already referred to, that the same person reappeared afterwards in a new character; and of this far from obvious meaning he would surely have given us at least some hint. If, however, as on the whole seems more probable, Pythis was in fact a distinct person from the architect, it is not in consequence necessary to suppose him much posterior to Scopas and his three immediate rivals. From the purity of style, and dignity of treatment, shown in the remains we possess of the quadriga and its two occupants, it may safely be concluded that their sculptor, whoever he may have been, belonged to a still brilliant age of art. In conclusion, it needs only to be pointed out that the question of identity or diversity in the persons of Phyteus and Pythis does not affect the main inquiry now in hand. Whether the artist who truncated the pyramid to receive his quadriga was or was not the same as he who at an earlier date had helped to design it in its original form, the work was equally an alteration, and the paragraph of Pliny, as read in the best authenticated texts, can only be grammatically and logically interpreted by keeping that alteration in view.

Here then ends the information I have been able to collect from ancient authors as to the architectural form of the Mausoleum. But there remain two writers of the sixteenth century whose notices of the remains of the building in times not much anterior to their own are each entitled to attention, and one of them to careful study.

1. The first is Fontanus, a jurisconsult of Bruges, who, in his history of the war between the Moslem invaders and Christian defenders of Rhodes, first published at Rome in 1524, relates that the Knights of Saint John, in 1402, alarmed by the conquests of Tamerlane in Asia Minor, resolved to occupy and fortify Budrum, then known as Mesy; and under the direction of Heinrich Schlegelholz, a German knight, built themselves a castle on the peninsular headland which adjoins, if it does not constitute, the site of the ancient royal palace. This castle, Fontanus says, was constructed in great measure with materials taken from the Mausoleum: *Ex ruinis Halicarnassi pyramidibusque Maussoli sepulchri . . . . . struere coepit Henricus Schlegelholz.*<sup>a</sup> It may be concluded from the fact of the building materials of the Mausoleum being then available for removal that the monument itself had previously become a ruin; and Sir Charles Newton is of opinion that it had been overthrown by an earthquake some time in the thirteenth or fourteenth century. But the one word in Fontanus' account which bears on our present investigation is *pyramidibus*, which, being in the plural, seems to con-

<sup>a</sup> Fontanus, *De bello Rhodio*, lib. ii. Bog. K. i. s. 2, ed. Hagenau, 1527.



firm the theory that the Mausoleum had, when perfect, a lower, as well as an upper, pyramid. I do not wish to put too much weight on Fontanus' authority; for it may certainly be doubted, both whether he had any authentic and accurate intelligence of what the ruins consisted of in 1402, and also whether, in speaking of "pyramids," he used the word in its literal and exact sense. But subject to these reservations, his statement may be noted as at least in accordance, as far as it goes, with the interpretation I have given to Pliny's description.

2. The second writer is entitled to much greater consideration. Indeed, his description of the Mausoleum in a state of ruin is inferior in importance only to Pliny's description of it when in a state of perfection. This writer is Guichard, who, in his *Funeraillies et diverses manières d'ensevelir des Romaines, Grecs, &c.*, published at Lyons in 1581, gives the following narrative of the discovery of the remains of the building, as related to D'Alechamps, an early editor of Pliny, by an eye-witness, and communicated by D'Alechamps to Guichard himself: \*

"L'an 1522, lors que Sultan Solyman se preparoit pour venir assaillir les Rhodiens, le Grand Maistre sçachât l'importance de ceste place, et que le Turc ne faudrait point de l'empieter de premiere abordée, s'il pouvait, y enuoya quelques chevaliers pour la remparer et mettre ordre à tout ce qui estoit necessaire soustenir l'ennemi, du nombre desquels fut le Commandeur de la Tourette Lyonnais, lequel se treuua depuis à la prise de Rhodes, et vint en France, ou il fit, de ce que je vay dire maintenât, le recit à Monsieur d'Alechamps, personnage assez reconnu par ses doctes escrits, et que je nomme seulement à fin qu'on sçache de qui ie tien une histoire si remarquable. ' Ces chevaliers estans arriués à Mesy, se mirent incontinent en deuoir de faire fortifier le chasteau, et pour avoir de la chaux, ne treuuant pierre aux environs plus propre pour en cuire, ni qui leur vinst plus aisee, que certaines marches de marbre blanc, qui s'eslevoient en forme de peron emmy d'un champ près du port, là ou jadis estoit la grande place d'Halycarnasse, ils les firent abattre et prendre pour cest effect. La pierre s'estant rencôtée bonne fut cause que ce peu de maçonnerie, qui paroissoit sur terre, ayant esté demoli, ils firent fouiller plus bas en esperance d'en treuuer d'avantage. Ce qui leur succeda fort heureusement: car ils recognurent en peu d'heure, que de tant plus qu'on creusoit profond, d'autant plus s'eslargissoit par le bas la fabrique, qui leur fournit par apres de pierres, non seulement à la faire de la chaux, mais aussi pour bastir. Au bout de quatre ou cinque jours, apres avoir faict une grande decouverte, par une apres disnee ils virent ouverture comme pour entrer dans une cave: ils prirent

\* Attention was, I believe, first drawn to this remarkable memorial by Sir Charles Newton in the Article in the *Classical Museum*, already referred to. See *supra*, p. 279, note b.



de la chandelle, et deualerent dedans, ou ils treuuerent une belle grande salle carrée, embellie tout au tour de colonnes de marbre, avec leur bases, chapiteaux, architraves, frises et cornices gravees et taillees en demy bosse: l'entredeux des colonnes estoit reuestu de lastres, listeaux, ou plattes bandes de marbre de diuerses couleurs, ornees de moulures et sculptures conformes au reste de l'œuvre, et rapportés propremēt sur le fonds blāc de la muraille, où ne se voyait qu'histoires taillees, et toutes batailles à demy relief. Ce qu'ayans admiré de prime face, et apres avoir estimé en leur fantasie la singularite de l'ouvrage, en fin ils defirent, briserent, et rompirent, pour s'en servir comme ils auoyent faicte du demeurant. Outre ceste sale ils treuuerent apres une porte fort basse, qui conduisoit à une autre, comme antichambre, ou il y avoit un sepulcre avec son vase et son tymbre de marbre blanc, fort beau et reluisant à merveilles, lequel, pour n'avoir pas eu assez de temps, ils ne decouvrirent, la retraicte estant desia sonnee. Le lendemain, apres qu'ils y furent retournés, ils treuuerēt la tombe decouverte, et la terre semee autour de force petits morceaux de drap d'or, et paillette de mesme metal: qui leur fit penser, que les corsaires, qui escumoyent alors le long de toute ceste coste, ayans eu quelque vent de ce qui avoit esté decouvert en ce lieu là, y vindrent de nuit, et osterent le couvercle du sepulcre, et tient on qu'ils y treuuerent des grandes richesses et *thesors.* Ainsi ce superbe sepulchre, apres avoir eschappé la fureur des Barbares, et demeuré l'espace de 2247 ans debout, du moins enseveli dedans les ruines de la ville d'Halicarnasse, fut decouvert et aboli pour remparer le chateau de S. Pierre, par les cheualiers croisés de Rhodes, lesquels en furent incontinent apres chassés par le Turc, et de toute l'Asie quant et quant."

Now it needs no argument to show that the remains which De la Tourette and his companions discovered, but whose origin and importance they evidently did not understand, were rightly described by Guichard as the remains of the Mausoleum. The upper part of the monument had been overthrown upwards of one hundred and twenty years before, probably by an earthquake, and such of its scattered fragments as still lay on the ground, and were useful either for masonry or the making of mortar, had been carried off to the castle or other places in Budrum by the parties mentioned in the passage from Fontanus already referred to, or by subsequent depredators. But the solid mass of the basement, being not so easily removable, was left by them untouched. Thus, by the time the Rhodian knights arrived, the chief indication of the ruined monument must have been a mound, covering merely its lower parts. Let us examine how they explored first the exterior, then the interior, of the building within this mound.

1. Their eyes were first struck by "certain steps of white marble, which rose

in the form of a *perron* (or outside staircase),<sup>a</sup> cropping out from the ground. These steps they forthwith cleared away and applied to the repair of the castle. Then, finding the material good for their purpose, they dug on lower in hopes of more. The *perron* was soon observed to spread out laterally as it descended vertically. Four or five days they dug, and then apparently a large piece of the buried building disclosed itself (for this seems to be the meaning of *apres avoir fait une grande decouverte*), through which they perceived an opening into the interior, like an entrance into a cellar. Thereupon they descended inside (*devalerent dedans*) and beheld so-and-so; what it was will be considered presently. Now the thing to be chiefly noticed in this description of the exterior of the basement is the evident loftiness of the flight of steps or gradines which enclosed it. Besides the part which the knights first saw above ground, and which was high enough in itself to suggest the idea of a *perron* or staircase, the part buried, which by its continuous enlargement is shown to have been a continuous flight of steps, was also so high as to require four or five days' excavation to get down to the opening into the interior; and, when the opening was passed through, they had again to descend to reach the floor of the inner chamber. Manifestly, such a *perron* as this cannot be regarded merely as an ordinary graduated plinth at the base of an outer wall. It cannot be adequately represented by the five ground-steps of Mr. Pullan's podium, still less by Mr. Fergusson's, or Herr Petersen's, three. To an unbiassed reader nothing can be clearer than the conclusion which all these learned writers shrink from accepting, because, as Sir Charles Newton declares,<sup>b</sup> it is incompatible with his and Mr. Pullan's idea of the "circumference of the pteron," an idea which the two succeeding restorers in substance adopt, though with minor modifications of their own. In reality this *perron*, this flight of gradines, descending to a depth reached only after several days of digging, marks an architectural feature as characteristic and unmistakeable as any I have known to be identified in the narrative of any excavation whatever. A flight of such gradines, continued round the exterior of a quadrangular space, is a truncated pyramid. The height of the flight of gradines here described is evidently sufficient to have equalled the height of the pyramid over the Pteron. Here, then, manifestly is the *pyramis inferior*, mentioned constructively and

<sup>a</sup> Sir Charles Newton translates *perron* simply as a "terrace"; but in the *Dictionary of the Academy*, 1878, *Perron* is defined thus: "Construction exterieure, qui est formée de plusieurs marches, et d'une plateforme, et qui sert à établir une communication directe entre deux sols de differente hauteur."

<sup>b</sup> *A History of Discoveries at Halicarnassus, etc.*, ii. 192.

indirectly by Pliny in the same sentence which describes, more explicitly and directly, the pyramid of equal height in the upper part. The misinterpretation of that sentence by my three immediate predecessors, in the way already pointed out, has led them into what I am obliged to characterise as a double practical error. First, they have, by assuming the quadriga to have surmounted the upper pyramid *as originally constructed*, been forced to interpolate a central space for a platform, which, besides its destroying all resemblance between the apex of the pyramid and that of a meta, carries the entire spread of the pyramid much beyond the area corresponding to twenty-four times the tread of the discovered steps, and, concurrently therewith, enlarges the plan of the Pteron to an equal extent. Secondly, as an inevitable consequence, they have found no space left outside the margin of the Pteron, and within the limits prescribed by the rock-cutting below, to admit of the introduction of a pyramid in the basement; and they have therefore cut the Gordian knot by deciding that, despite any words of Pliny's, or any facts of De la Tourette's, the lower pyramid could have had no existence, and all evidence to the contrary must be simply ignored. In my opinion, however, no theory of restoration can claim to be reconcileable with De la Tourette's account, which does not make the Mausoleum rise from a lofty graduated pyramidal basement; and none can claim to accord with Pliny's description, grammatically rendered according to the only authentic wording, which does not make that basement equal in height to the twenty-four-stepped pyramid over the Pteron.

Thus much for the exterior of the building discovered by the knights. Let us next consider the account given of the interior.

Passing through the cellar-like opening which they had unexpectedly discovered, whether an originally and purposely constructed passage, or merely the chasm of an accidental collapse, does not appear from the account, the knights entered the principal chamber within. Of this De la Tourette gave a description to D'Alechamps, the particulars of which deserve our careful examination. The chamber, says the knight, was surrounded by columns, with their bases and capitals, their architraves, friezes, and cornices; and the *entresaux* or intercolumns were adorned with various coloured marbles. This last statement proves that the columns were not insulated, as Mr. Fergusson has made them,<sup>a</sup> but engaged in the wall, as indeed is further shown by the statement that their bases and capitals, as well as their entablatures, were carved in half-relief (*demy-bosse*). Which architectural order they belonged to De la Tourette does not say, perhaps was not learned enough to know; but clearly it was not the Doric, as he mentions bases,

<sup>a</sup> *The Mausoleum at Halicarnassus restored, etc.*, Pls. I. and II.

which the Greeks did not use in that order. The intercolumnar spaces or curtain walls were, as I understand the description, so arranged as to show panels seemingly sculptured in the white wall itself, with battle-scenes in half-relief; and the panels themselves were enclosed within borders of coloured marbles, veneered and moulded. No niches are mentioned, no statuary in the round, no altar, sarcophagi, or furniture.<sup>a</sup> All this is so definite, circumstantial, and exact, that a restorer of the Mausoleum would seem to have little to do as regards the interior, but to represent in diagram what Guichard has copied down in words. Not so, however, thought Mr. Pullan. He had made up his mind that the interior of the entire building could only have been designed on a scheme by which two exactly similar beehive-shaped chambers, like those of Mycenæ and Orchomenus, were piled one over the other, in the manner of the Nurhaghe of Sardinia<sup>b</sup> (see Fig. 7). As no single feature in a building so constructed would be consistent with De la Tourette's narrative, he boldly resolved to treat the whole of that narrative as unworthy of consideration. The only argument he thought it worth while to offer for this summary proceeding is to be found in the following words: "This description," meaning Guichard's, "may have been heightened by the excited imagination of the original narrator (De la Tourette), for the chamber could have been of no great size, or there would surely have been found some traces of this architectural magnificence,"<sup>c</sup> words in which he takes final leave of all the particulars of structure and ornamentation recorded in the knight's account, and proceeds to substitute his own preconceived idea of the interior. Now the description of "the original narrator" is comprised, as I read the paragraph, in the sentences extending from *les chevaliers*, etc. down to *thesors*. The preceding or introductory sentence, and, again, the sentence beginning with *Ainsi*, which contains the writer's final comment or moral upon the tale, are additions of Guichard's own. Throughout the entire paragraph I can detect but one statement which some might possibly attribute to what Mr. Pullan calls an "excited imagination," namely, that which assigns to the Mausoleum an antiquity of two thousand two hundred and forty-seven years, instead of about one thousand eight hundred and seventy-two, at the date of its destruction. But this, after all, is but the blundered chronology of Guichard, and in no way affects the testimony of De la Tourette as

<sup>a</sup> Niches with statues are introduced by Herr Petersen (pp. 13, 15, Pl. 1.) in his elevation of the exterior, which is founded, as will be presently seen, on Guichard's account of the inner chamber. An altar and sarcophagi are suggested for this chamber by Mr. Fergusson (p. 35).

<sup>b</sup> See Pullan's Essay in Newton's *A History of Discoveries at Halicarnassus, etc.*, ii. 184.

<sup>c</sup> *Ibid.* ii. 184.

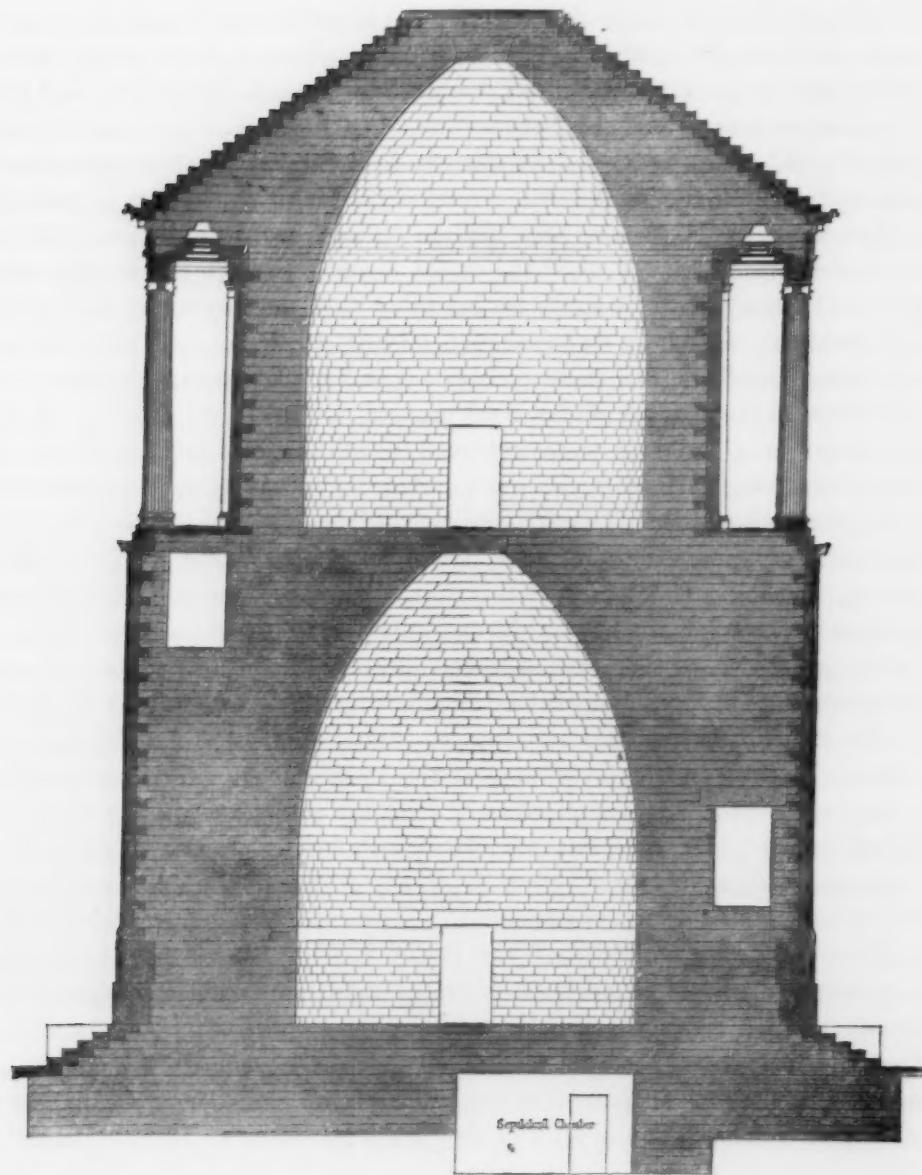


Fig. 7. Mr. Pullan's Transverse Section of the Mausoleum. (From Newton's *A History of Discoveries at Halicarnassus, etc.* vol. i. Pl. XX.)



to what he had actually seen. That testimony seems to me as *unexcited* and *unimaginative* as it could well be; indeed, little more than a simple enumeration of matter-of-fact details. It contains throughout no laudatory epithet, except the two words describing the chamber as *belle* and *grande*, and to contend that the latter adjective implies necessarily such "great size" as to justify the rejection of the whole account as the product of an "excited imagination" can surely not be the note of candid or sensible criticism. As for the argument that no "traces were found of such architectural magnificence," it is disposed of by the narrative itself. For, with a frankness which, in proportion as it discredits his character as a man of culture, enhances his credibility as a witness, the knight tells us that he and his comrades, after examining and admiring the singularity of the work, *defirent, briserent, et rompirent*, "pulled to pieces, smashed, and broke up," the whole, "to use it as they had already used the remainder," that is, to obtain either blocks for building, or lime for mortar. By a singular fate, indeed, that part of the Mausoleum which was first overthrown met with a more honourable fortune in the end than that which had stood unshaken for two or three hundred years longer. The quadriga, the upper pyramid, and the Pteron, having been broken up by the earthquake and strewn piecemeal over the surrounding land, their still unappropriated fragments were doubtless covered with earth, vegetation, or rubbish, at the time of the knights' arrival, and were thus happily preserved from their spoliation or violence, to become in a later age objects of admiration and study in our national Museum. But the chamber in the basement, which the knights of St. John found intact, presented on its walls, all ready to hand, the very thing they were in quest of; they therefore, with no difficulty and seemingly with as little scruple, carried off or destroyed the whole. The account preserved by Guichard contains the only record in ancient or medieval literature of the internal arrangement and decoration of any part of the Mausoleum. It is a strong confirmation of its truthfulness that all the details mentioned are in perfect accord with what we know of Greek art and Greek taste; for how could a rude soldier like De la Tourette have known how to draw so consistent a picture of an ancient architectural interior unless he had actually seen all that he describes? If we are at liberty to set at nought that description on no better grounds than Mr. Pullan's, we may as well abandon at once any attempt at a restoration according to evidence. It is due to Sir Charles Newton to mention that, in the chapter he devotes to the advocacy of his fellow explorer's architectural scheme, he makes no attempt on his own part to disparage the credibility of De la Tourette's narrative. On the contrary, he frankly admits not merely its manifest accuracy as a whole, but,



in particular, points out that the description of the relics in the sepulchral room adjoining the principal chamber so fully agrees with the discoveries made in other Greek tombs, such, for example, as those at Panticapæum,<sup>a</sup> as to "furnish incidental proof of the truthfulness of the knight's account generally."<sup>b</sup> It is therefore to be regretted that, by adopting Mr. Pullan's scheme of restoration as his own without any reservation, he has indirectly made himself responsible for the trivial and shallow reasoning on which exclusively Mr. Pullan founds his rejection of that arrangement of the interior which alone has historical authority, and his substitution of an arrangement which has no authority but his own imagination.

Herr Petersen's treatment of De la Tourette's account of the interior is not open to similar criticism. He loyally accepts the description, with its architectural details, as authority beyond cavil. But his interpretation of it is of a kind which can only be characterised as non-natural. By a process of reasoning I am at a loss to understand he has persuaded himself that, when the knight tells us that the chamber into which he and his comrades penetrated with so much labour was adorned all round (*embellie tout au tour*) with columns and wall decorations, he is referring not to the interior of the building, which was then before their eyes, but to the exterior, which they no longer saw, and of which the knight had already given a quite different account.<sup>c</sup> He has accordingly designed an elevation for the east and west fronts of the Mausoleum, as seen from without, in which the architectural features of the chamber described by De la Tourette, or what he intends for those features, though most inaccurately reproduced, are worked in as embellishments of the external walls of the lower story. Those walls form the outer side, as the walls of the chamber form the inner side, of the mass of masonry, 28 feet thick in Petersen's plan,<sup>d</sup> which enclosed the chamber itself; a mass which, with its several wall-surfaces, he turns literally inside out, and seems to think he is thereby satisfying the requirements of the knight's description. I have thought

<sup>a</sup> See *Antiquités du Bosphore Cimmerien*, fol. i. pp. 19, 27.

<sup>b</sup> *A History of Discoveries at Halicarnassus, etc.*, ii. 79; and cf. p. 261.

<sup>c</sup> The following quotations from Herr Petersen show what is his understanding of the knight's description. "Er (i.e. De la Tourette) die *äussere* umgebung mit einsicht beschreibt, und vom *innern* gar nichts sagt" (p. 7). "Dass aber der unterbau *ausseen* mit halbsäulen, architrav, fries, und gesims geschmückt und in den intercolumnien eingerahmte reliefs angebracht waren, bezeugt der bericht vom abbruch des gebäudes aus dem jahr 1522" (p. 13). "Die beschreibung des von säulen u. s. w. umgebenen saales können also nur auf den unterbau und das autour dem sprachgebrauch gemäss nur auf die *ausseseite* desselben gehen" (p. 14).

<sup>d</sup> See Petersen's ground plan.

it only due to Herr Petersen to state his theory of the basement, as professedly drawn from Guichard's account; but I trust I may be excused from offering any serious criticism upon it. How an interior such as that described by De la Tourette was really combined with an exterior of the form and dimensions recorded by Pliny and the other writers already quoted, will be considered under a later head.

#### B. EVIDENCE OF MONUMENTS.

From ancient literature, with its sixteenth century sequel, we now pass to the remains of ancient monuments, and search for any light they may throw on the architecture of the Mausoleum. Here a certain discrimination must be carefully made. We are not now dealing with the question, what was the general form of Greek tombs, nor how was their architecture adapted to their special uses, nor what classes of sculpture were thought most fit for their adornment, nor any other such wide-reaching inquiry. If we were, any sepulchral monument, of whatever date in the history of Greece, might be more or less useful for our guidance. But the problem before us is of more limited scope. We are concerned merely to discover what were the special structural features of a particular historical building, which so distinguished it from other buildings of an analogous class as to make it worthy, in the opinion of the ancients, to rank among the Seven Wonders of the World. True it is, Vitruvius and Pliny both tell us that this honourable distinction was mainly due to the excellence of its sculptures. But the *consensus* of all ancient testimony attributes to the Mausoleum a no less marked pre-eminence in architectural beauty. The words of Martial already quoted can refer only to the construction of the building; and it must have been from its construction alone that its name became for ever after a synonym for whatever was most magnificent in sepulchral architecture. Satyrus and Phyteus, its designers, obtained, no less than the sculptors who decorated its sides, an imperishable name in the history of art; and they found in their work sufficient subject-matter for an explanatory or critical treatise. It can hardly therefore be doubted that the architectural design of the Mausoleum must have had some notable individuality, some exceptional elegance of form or ingenuity of composition, which, no less than its size and rich ornamentation, distinguished the building from the ordinary type of tombs to which the Greeks were accustomed in the middle of the fourth century. To what still extant monuments then can

we most safely turn, as likely to furnish a clue to the nature of this structural distinction, whatever it may have been? Clearly, only to those which follow the Mausoleum in date, and which may reasonably be presumed to have been imitated from, or in some way influenced by it. Monuments anterior even by a single year would for this purpose be useless or misleading. They might illustrate collateral points connected with the building, but not the special point into which we are now inquiring. Let us take an illustration of the argument from a kindred art. Suppose the question were, what was the attitude of the statue of Aphrodite at Cnidus, which distinguished it from all other representations of the goddess, and was felt at once by contemporaries to realise the true sentiment of its subject. To no purpose should we seek that attitude amongst sculptures of any earlier date than Praxiteles; for no mere improvement, however skilful, upon pre-existing types would have sufficed to secure for that sculptor's work its unanimous acceptance as the proper ideal of the lovely divinity. But every figure of Aphrodite, in statuary, coin, or gem, known to be of later date, if at all corresponding with Lucian's and other well-known descriptions, would be of importance, for it might not improbably have been copied, directly or indirectly, from the then recognised model. And it would matter little, though the supposed copy were of a much later age (like the Aphrodite on the coins of Cnidus struck in the time of Plautilla) or of any degree of inferiority in workmanship. Just so with the Mausoleum. A building whose unique architectural merit excited the wonder and admiration of all antiquity cannot be believed to have been a mere product evolved from preceding types, a copy or modification of earlier works. In seeking therefore for probable clues to the design of the Mausoleum amongst other known sepulchral monuments, I shall studiously eliminate all those which there is good reason to think anterior to B.C. 353, the supposed year of Mausolus' death.

Now the monuments which have been chiefly referred to by modern writers, as more or less throwing light on the question of the form of the building, are in all, I believe, fourteen. Some of them are cited by Mr. Falkener, some by Sir Charles Newton, and some by Mr. Fergusson. Amongst these, however, are included, besides an example of the Nurhaghe of Sardinia,<sup>a</sup> which does not call for any notice here, two buildings which, however interesting and instructive in other points of view, cannot, under the chronological limitation here laid down, be admitted as carrying authority in the present inquiry without a previous

<sup>a</sup> Taken from Della Marmora, *Voyage en Sardaigne*, and included in the collection of monuments published in Newton, *A History of Discoveries at Halicarnassus, etc.*, i. Pl. XXXI.

determination of the period to which each of them really belongs. Let us therefore examine carefully the evidence in each case bearing on the question of date.

1. The first of these, which is included in Mr. Fergusson's list of so-called *Exempla*,<sup>a</sup> is the "Lion Tomb" near Cnidus. This was originally brought to notice (though not with any reference to the problem of the Mausoleum) by the discoveries of Sir Charles Newton and Mr. Pullan, from whose work Mr. Fergusson has taken a reduced wood-cut illustration of it. This monument has certainly two features in common with the Mausoleum, as described by Pliny, a pyramidal roof and a colossal piece of sculpture on the top. The pyramidal form, however, had been from early times and in various countries associated with important sepulchres; so that it would of itself furnish no proof that this tomb was copied specially from the Mausoleum. The lion also on the summit is merely the habitual symbol of valour, such as was placed upon the funeral mounds of warriors slain in battle, even though defeated, as at Chæronea; and it cannot fairly be held to have been first suggested by the quadriga which crowned the Mausoleum. These features therefore supply no artistic reason for considering the monument posterior to B.C. 353. Nor is there any historical reason for attributing it to a later date. On the contrary, Sir Charles Newton, who examined and described this sepulchre with much care, is of opinion that it was a *polyandrion* belonging to a period not later than the first half of the fourth century. He suggests that it might have been erected for those Cnidians who fell in repulsing an attack of the Athenian fleet in B.C. 412, or for some of the combatants in the great naval battle which took place near Cnidus, B.C. 394, when the Lacedæmonians were defeated by Conon. In the latter alternative, as I would venture further to suggest, the sepulchre might probably have covered the remains of Pisander and his comrades, who fell sword in hand when their ship was driven on shore. Whichever of these two dates, however, we adopt, and I know of no historical objection to either, we must equally treat the Lion Tomb, in spite of Mr. Fergusson's authority, as outside the range of monuments bearing on our present inquiry.

2. The second monument, which is also included in Mr. Fergusson's list of *Exempla*,<sup>b</sup> requires a fuller investigation. It is the Ionic building which formerly stood at Xanthus, and of which the most important remains are now in the British Museum. It has been named by Mr. Watkiss Lloyd the "Nereid Monument," from the statues which are supposed to have occupied its intercolumns, and has been variously described as a trophy, herōon, or tomb. Nothing but the

<sup>a</sup> *Mausoleum, etc.*, 14.

<sup>b</sup> *Mausoleum, etc.*, 16.

high authority of Sir Charles Newton, who assigns it to the *latter* half of the fourth century, B.C., though without giving any reasons for his opinion, would have led me to hesitate in pronouncing it anterior to the Mausoleum.<sup>a</sup> So far as I know, no other archæologist of note, with one rather doubtful exception, has held Sir C. Newton's view. The exception is the late learned Ed. Gerhard of Berlin, who, writing in 1844, immediately after the acquisition of the remains by the Museum, attributed them to "a period a little anterior to Alexander the Great."<sup>b</sup> Whether by this phrase he meant to convey a definitive opinion that the Xanthian monument was built within twelve or fourteen years before the accession of Alexander in B.C. 336, and therefore after the supposed erection of the Mausoleum, may be doubtful. But even if he did, considering that he had never himself seen any of the Mausoleum sculptures, the first series of which was only brought to Europe in 1846, his judgment on the chronological precedence of the two monuments would hardly be entitled to its usual weight. The theories of other writers on the age of the Xanthian building have been founded principally on the interpretations given to the historical scenes represented on the two friezes of its basement.

These theories may be ranged in three classes :

(A) Those which explain the scenes, as the capture of Xanthus by Harpagus, the general of Cyrus, with the aid of Ionian and Æolian troops, *circa* B.C. 546. Sir Charles Fellows, who excavated and brought over the remains of the monument from Lycia, first suggested this interpretation, believing the sculptures to have been executed in the generation following the event commemorated ; at any rate, not later than B.C. 500.<sup>c</sup> Mr. B. Gibson, brother to the eminent sculptor, concurred in this view,<sup>d</sup> as did also Mr. Falkener, who measured, drew, and described the architectural fragments with the advantage of professional experience.<sup>e</sup> Mr. Watkiss Lloyd, in an ingenious essay on the history and religious motive of the building, considered it to have been erected

<sup>a</sup> "The Ionic monument at Xanthus was probably erected between B.C. 350 and 300. Its design, when compared with that of the Mausoleum, exhibits a general inferiority both in the sculpture and architecture, with such similarity in certain features as might be expected if, as I suppose, the work of Satyrus and Phyteus was rather earlier in date, for so celebrated a monument could hardly fail to affect the character of sepulchral architecture not only in the immediate neighbourhood of Halicarnassus, but in the adjacent provinces." *A History of Discoveries at Halicarnassus, etc.*, ii. 204.

<sup>b</sup> "Im zeitalter kurz vor Alexander," *Archæologische Zeitung*, Oct. and Nov. 1844, p. 356.

<sup>c</sup> Fellows' *Ionic Trophy Monument*, 12.

<sup>d</sup> *Museum of Classical Antiquities*, i. 154.

<sup>e</sup> *Ibid.* 280.



shortly after the battle of Eurymedon, B.C. 466, as an *agalma*, or offering to certain deities, in acknowledgment of the recovered prosperity of Xanthus after its devastation by Harpagus.<sup>a</sup> Dr. Birch accepted Sir Charles Fellows' interpretation of the friezes, but thought, from their artistic style, that they must have been subsequent to and perhaps imitated from those of the Theseum and of the Temple of Wingless Victory at Athens.<sup>b</sup> Mr. Murray, in his valuable *History of Greek Sculpture*, takes a similar view. He traces in the lower frieze of the basement the pictorial influence of Polygnotus, and likens it in this respect to the Phigaleian sculptures, which date from *circa* B.C. 429. He also compares both the upper and lower friezes to the two which formerly adorned the *peribolus* wall of another Lycian tomb, found in 1881 at a place called Gjölbaschi, friezes which are now at Vienna, and are uniformly referred to the latter half of the fifth century.<sup>c</sup> The resemblance indeed between these two groups of sculpture, both in subject, artistic treatment, and details of military architecture and costume, is singularly close. Colonel Leake, in a letter to Mr. W. R. Hamilton, without disputing the reference of the friezes to Harpagus, thought their style belonged to the end of the fifth or beginning of the fourth century;<sup>d</sup> and Sir Edmund Head, who quotes this letter in an article in the *Classical Museum*,<sup>e</sup> considers them at least a century, and perhaps a century and a half, later than the event they were believed to represent.

(B) The theory of Welcker.<sup>f</sup> This is founded on the apparent incompatibility of one of the scenes included in the upper frieze of the basement, which represents the negotiation for the surrender of the beleaguered city, with the tragic incident described by Herodotus as attending the capture of Xanthus.<sup>g</sup> As a more probable interpretation, Welcker suggests that the monument might have been a memorial of some victory gained by the Persian commissary at Xanthus, with the aid of Greek auxiliaries, over some Cilician city which joined in the revolt against Artaxerxes, B.C. 387; and as Evagoras of Cyprus, who had stirred up this revolt, was defeated in a naval battle by the Persians, Welcker thinks the statues of Nereids might have been intended to symbolise the connection of the victory at sea with the victory on land. Whether or not this theory be tenable on historical grounds, it is hardly consistent with the opinion

<sup>a</sup> *Xanthian Marbles. Nereid Monument*, 15.

<sup>b</sup> *Archaeologia*, xxx. 196.

<sup>c</sup> *Transactions of the Royal Society of Literature*, 2nd Ser. i. 260.

<sup>d</sup> *Alte Denkmäler*, v. p. 247. cf. Welcker's *Notes to Müller's Ancient Art* (English ed.), 104-5.

<sup>e</sup> *Lib. i. c.* 176.

<sup>g</sup> ii. 204, *seq.*

<sup>h</sup> i. 227.



expressed by its author himself on a preceding page as to the artistic quality of the reliefs he is interpreting, which is in the following words: "the masterly friezes of the building point rather to the time of the Phigaleian sculptures."<sup>a</sup>

(C) The explanation of Urlichs, who, finding among the fragments of Theopompus, the Chian historian, a passage from the twelfth book of the *Philippics*, which seemed exactly illustrated by the incidents of the upper frieze,<sup>b</sup> suggested that the city there represented was Telmessus, which was besieged and taken, according to his calculation, in or about B.C. 375, by Pericles, dynast of Lycia.<sup>c</sup> The objection that Telmessus was a maritime town on the Glaucus Gulf, whilst no semblance of sea or coast is traceable in the sculptures, was met by the hypothesis that the town was taken by operations limited to the land side, and that the proximity of the sea was meant to be suggested by the statues of Nereids. This interpretation has been adopted by Overbeck,<sup>d</sup> Lübke,<sup>e</sup> Michaelis,<sup>f</sup> and Furtwängler,<sup>g</sup> as well as by Mr. Walter Perry,<sup>h</sup> and by M. Maxime Collignon.<sup>i</sup> But whilst concurring in Urlichs' explanation of the bas-reliefs, Furtwängler and Collignon dissent from the date he assigns to the event they represent. Dr. Furtwängler points out that Theopompus's account of the capture of Telmessus does not form part of a continuous history of the period covered by the twelfth book of the *Philippics* (in which case its date might have been approximately inferred from its relative position in the narrative), but occurs in a separate "episode," describing an event which had taken place at some previous time which the historian does not specify. Assuming, with Urlichs, that the achievement of Pericles is the event commemorated in the sculptures, there is still, as Furtwängler contends, no authority for limiting Pericles' reign to B.C. 375-370, or any similar period. There are, indeed, historical reasons mentioned by Furtwängler for not carrying back that reign further than B.C. 425; but at any later date than this it might have begun, and the capture of Telmessus might therefore have occurred; so that the question between the last quarter of the fifth century, and the first quarter of

<sup>a</sup> Notes to *Ancient Art*, 103.

<sup>b</sup> Λύκιοι προς Τελμισσεῖς, ἡγουμένου αὐτοῖς τοῦ σφῶν βασιλέως Περικλέους, ἐπολέμησαν, καὶ οὐκ ἀνῆκαν πολεμοῦντες ἕως αὐτοὺς τειχῆρεις ποιήσαντες καθ' ὁμολογίαν παρεστήσαντο. *Fragmenta Historicorum Græcorum*, Didot, 1841, i. 296.

<sup>c</sup> *Verhandlung d. XIX. Philologen Versammlung* (in Braunschweig, Sept. 1860), 62, *seq.*

<sup>d</sup> *Gr. Plastik*, 3rd. ed. ii. 158.

<sup>e</sup> *Hist. Sculpt.* (English Ed.), i. 207.

<sup>f</sup> *Ann. dell' Ist. Arch.*, 1875, p. 173.

<sup>g</sup> *Archæologische Zeitung*, 1882, p. 358.

<sup>h</sup> *Greek and Roman Sculpture*, 506.

<sup>i</sup> *Gazette des Beaux Arts*, tom. xxxv. Feb. 1887.

the fourth, is in fact to be decided by artistic evidence alone. Dr. Furtwängler is of opinion (1) that the style of composition in the Xanthian friezes is, as Mr. Murray also thinks, derived from the wall-paintings which so greatly influenced Attic and Ionic art in the latter half of the fifth century; (2) that in parts their treatment resembles the Panathenaic frieze of the Parthenon, in other parts is almost a reproduction of the reliefs of the Temple of Wingless Victory; (3) that the Nereid figures approach most nearly in design, though inferior in execution, to the Victory of Pæonius, dating from *circa* B.C. 440, and to the lately discovered group from the temple in Delos, *circa* 425; and (4) that, as Professor Michaelis also has remarked, the true prototype of the archaistic statues of lions supposed to have stood within the portico is to be found in the terra-cottas from Melos now in the British Museum. On these grounds, mainly, he arrives at the conclusion that the monument belongs to one of the last two decades of the fifth century. In this conclusion, generally, M. Collignon concurs, though with some modification as to the artistic character of the sculpture, which he regards, in common with Lubke and Michaelis, as a hybrid product of Attic and Lycian art; an opinion which no intelligent observer of the almost Assyrian realism shown in the scenes of the siege can feel to be unfounded. Lubke, however, adopted the later date of Ulrichs, relying mainly on supposed architectural analogies, particularly in the capitals of the Ionic columns, which he, as well as Michaelis, thought imitated from those of the Erechtheum. I confess myself unable to trace this imitation; but assuming it to be real, it would not carry the Xanthian monument much later than B.C. 409-8.

Between the several theories here set forth I purposely abstain from attempting to adjudicate. The importance and interest of the Xanthian monument, both in an historical and artistic sense, have led me to state those theories with considerable, it may perhaps be thought unnecessary, fullness. To discuss their relative claims, however, and weigh them in the balance with opinions and arguments of my own, would not merely prolong the discussion inconveniently, but would be, strictly speaking, irrelevant to the present inquiry. For, widely as the epochs advocated by the several writers vary, ranging from the end of the sixth to the beginning of the fourth century, all of those writers agree on the only point which affects the question before us, namely, in pronouncing the building older than the Mausoleum. I shall therefore, without further hesitation, reject from consideration any attempt to treat the architectural features of the Xanthian monument as offering a clue to the special characteristics, whatever they were, of the masterpiece of Satyrus and Phyteus.

Having thus put aside on chronological grounds two of the principal monuments in Mr. Fergusson's list, I need only deal with the remainder as they occur also in the lists of Mr. Falkener and Sir Charles Newton. The latter includes a monument on the date of which it will be proper here to submit a few words, namely, the so-called tomb of Theron.<sup>a</sup> If this designation of that building be correct, it may be at once excluded from the present discussion; for Theron the Tyrant died in B.C. 472. It is known from Diodorus that he was buried in a tomb of magnificent dimensions in the outskirts of Agrigentum. When the Carthaginian general Hannibal was besieging that city in B.C. 406, he ordered the destruction of all the large monuments outside its walls, to facilitate his attack. Under this sentence Theron's tomb was actually in course of demolition, when it was struck and shattered by lightning, whilst at the same time a pestilence broke out in the besieging army, which carried off Hannibal himself. These calamities, being interpreted as divine judgments upon the sacrilege committed, put a stop to the Carthaginian devastation, and thus saved whatever still remained of the tomb of Theron.<sup>b</sup> Wilkins, who published fully the monument copied in Sir Charles Newton's plate, which now stands in nearly perfect condition near the modern Girgenti (though without the pyramid on the top which Wilkins represents, and which is merely a conjectural restoration), believed that it was the same to which Diodorus refers.<sup>c</sup> This, however, is not the opinion of later archaeologists. The small scale of the monument, barely 29 feet high, and 17 feet square in plan, with the absence of any signs either of injury from lightning or of partial demolition, is inconsistent with the language of Diodorus; whilst the barbarous intermixture of Doric and Ionic details in the engaged columnar ordinance makes it hardly possible to refer such a work to the best age of Greek architecture.<sup>d</sup> Canina accordingly treats the association of the tomb with Theron as unworthy even of discussion.<sup>e</sup> The same view is taken by the Duke of Serradifalco, who attributes the building, which he regards as only a cenotaph, to the Graeco-Roman

<sup>a</sup> See Canina, *Architettura Greca*, Pl. clvii. from which Sir C. Newton has taken his illustration.

<sup>b</sup> Ἐνέπεσεν εἰς τὸ στρατόπεδον πολλὴ δεισιδαιμονία. Τὸν γὰρ τοῦ Θήρωνος τάφον ὄντα καθ' ὑπερβολὴν μέγαν συνέβαινεν ὑπὸ κεραυνοῦ διασεσείσθαι. Διόπερ αὐτοῦ καθαιρουμένου, τῶν τε μαντέων τινες προνοήσαντες διεκώλυσαν, εὐθὺς δὲ καὶ λοιμὸς ἐνέπεσεν εἰς τὸ στρατόπεδον. *Diodorus Siculus*, lib. xiii. c. 86.

<sup>c</sup> *The Antiquities of Magna Græcia*, 36.

<sup>d</sup> The so-called "Tomb of Absalom" at Jerusalem, the date of which is equally uncertain with that of the "Tomb of Theron," exhibits exactly the same solecism, just as if one were a copy of the other. See Williams, *Holy City*, ii. 157, Pl. v.

<sup>e</sup> v. 565.

period.<sup>a</sup> Agreeing as I do with these latter judgments, I shall, in the list of possible imitations of the Mausoleum, admit this monument, as subject to no objection on chronological grounds. Nor do I on the same grounds demur to any other of the monuments included in Sir Charles Newton's plate, except of course the Sardinian Nurhage; and these I presume he did not himself intend to represent as derivatives from the Mausoleum.

There remain then in all eleven examples of sepulchral architecture described or delineated by Mr. Falkener, Sir Charles Newton, and Mr. Fergusson, to the admissibility of which for the present purpose I make no objection on chronological grounds. Those examples are still existing at the following places: 1. Souma, in Algeria. 2. Ooran, in Phrygia. 3. Celenderis, in Cilicia. 4. Mylassa, in Caria. 5. Girgenti, in Sicily. 6. St. Remy, in Provence. 7, 8, 9. The Regio Tripolitana of Africa. 10. Jerusalem. 11. Dugga, near Tunis. But these monuments vary much from each other in design. How many and which of them then can be accepted as reproductions, imitations, or modifications, of the great Halicarnassian exemplar? To entitle any to this claim they should, in my opinion, conform to the following conditions:

1. They should, if more than one, have some characteristic and distinctive feature in common.

2. That feature should not be found in any sepulchral monument earlier than B.C. 353.

3. The feature referred to should have nothing in it incompatible with the descriptions of the Mausoleum by ancient writers.

4. The same feature should show some peculiar and quasi-typical form of design, which, when adapted, as it originally was, to a larger building, and worked out in a purer style, might naturally have given to that building high celebrity as an architectural masterpiece.

Now, Sir Charles Newton points out that most of the monuments in his plate of illustrations, meaning evidently those at Mylassa, Girgenti, St. Remy,<sup>b</sup> and two of those in the Tripolitan Region, have not merely one, but three features in common, namely (as he says), "a lofty basement, a pteron, and a pyramid." All these therefore comply, even to superfluity, with our first condition. Even the remaining Tripolitan monument, as well as the monument at Dugga, and the so-called "Tomb of Zecharias" at Jerusalem, comply sufficiently with the same

<sup>a</sup> *Antichità della Sicilia*, iii. 70, tav. 28-31.

<sup>b</sup> Strictly speaking, the St. Remy monument is not surmounted by a pyramid, but a cone; but this is so slight a difference that the building may still be taken as comprised in the same class as the others.

condition; for though each wants either the "lofty basement" or the "pyramid," they all have the common feature of a "pteron."<sup>a</sup> But this feature, in the Agrigentine and Tripolitan buildings, as also in those at Jerusalem and Dugga, fails to comply with either of the other three conditions. For a solid pteron, with columns engaged on each face, which is the characteristic of each of these buildings, violates, firstly, the second condition, being found in the Lion Tomb at Cnidus, which has been already shown to be older than B.C. 353; secondly, it violates the third condition, being in itself quite incompatible with that openness of structure and permeability to air which is involved in any reasonable interpretation of Martial's words; and thirdly, it violates the fourth condition, since it contains, so far as I can see, no typical element of beauty or originality, which, to whatever larger scale adapted, or with whatever superior skill wrought out, could have accounted for the world-wide celebrity of the original model. It follows that in none of these buildings, at Girgenti, in the Tripolitan Region, at Jerusalem, or at Dugga, is the feature we are seeking to be found.

There remain, however, in our previously reduced list of eleven, five other monuments, those at Mylassa, Souma, Ooran, Celenderis, and St. Remy. Of these the first three possess alike one characteristic feature which, in my opinion, adequately satisfies all the required conditions. The two others fail in one essential quality of the same feature, but nevertheless approach so nearly in general character to it, that it is right not altogether to exclude them from our consideration. Let us describe them all in succession.

1. The most important of all known examples is that at Mylassa.<sup>b</sup> This town was long the capital of Caria; and though Mausolus transferred the seat of government to Halicarnassus, Mylassa continued to flourish in the time of Augustus, to whom, in conjunction with Roma, it built and dedicated a temple. Its distance from Halicarnassus was inconsiderable, and as the two most important cities in Caria, intercourse between them, so long as they were both prosperous, must have been constant. It cannot, therefore, be doubted that the designer of the monument at Mylassa must have been familiar with the celebrated

<sup>a</sup> The three monuments from the Tripolitan Region are represented in Sir C. Newton's plate as given in Barth's *Travels in North and Central Africa*, i. 35, 117, 124. The Dugga monument is there reproduced from the *Transactions of the American Ethnological Society*, 1845, i. 477, Pl. ix. x.; and the "Tomb of Zecharias," from De Saulcy's *Voyage autour de la Mer Morte*, Atlas, Pl. xli.

<sup>b</sup> Published by the Dilettanti Society, *Ionian Antiquities*, part ii. Pl. xxiv. The best description of this monument is to be found in Choiseul-Gouffier (*Voyage Pittor. de la Grece*, i. 144, 161), who says that he purposely illustrates it with the greater fullness because it recalls, though in a later age and in a changed architectural style, the "taste and form" of the Mausoleum.



building which was the pride of Halicarnassus and of the whole Carian people; and to it he would naturally look as the highest model of sepulchral architecture. Consequently, in the Mylassa monument, more than any other we know, we may reasonably expect to find at least a partial reproduction, less pure, perhaps, in style, and far less imposing in scale, but still a traceable reproduction, of the distinctive and characteristic feature, whatever that may have been, which had obtained for the Mausoleum its extraordinary renown. What we actually find at Mylassa, in the present dilapidated state of the building (Fig. 8), is this:

(1.) A square basement or podium, rising from a rather fantastically moulded plinth, and with a door on one of its sides, irregularly and rather awkwardly placed. (2.) Then a pteron formed of an entirely open quadrangular space,\* surrounded by a cincture of pilasters and columns, the pilasters being at the four angles, the columns between them, two on each side, supporting a shallow entablature. (3.) Above this the remains of a pyramid of peculiar and ingenious construction, to which, I believe, no parallel is to be found in any other monument of Greek or Roman origin still surviving. The shafts of the columns are of abnormal composition, quasi-elliptic in plan, and fluted only in their upper parts; the frieze is pulvinated, and there is no cornice; whilst the florid and rather *baroque* ornamentation sufficiently proves the whole work to belong to a late, even a debased, period. But this in no wise affects the probability that the most striking and distinctive feature of the monument, its light and transpicuous pteron, "pervious to winds, and open every way," would have been imitated from, and therefore would give a clue to, the most striking and distinctive feature of the Mausoleum.



Fig. 8. Tomb at Mylassa. (From Fergusson's *Handbook of Architecture*, i. 353.)

\* Chandler asserts (*Travels in Asia Minor*, 180) that "the sides, which are now open, were



2. The next example has no claim to authority on the score of locality, but is here cited for its structure alone. It is situated at a spot called Souma, about nine miles from the ancient Cirta in Numidia, now better known under its later name of Constantina, in Algeria. It was first published, as theoretically restored by M. Ravoisier, in the *Exploration Scientifique de l'Algerie*, in 1846; and from the geometrical elevation there engraved Mr. Falkener drew the perspective view published in his journal,<sup>a</sup> and of which a copy is given in Fig. 9. This building, in

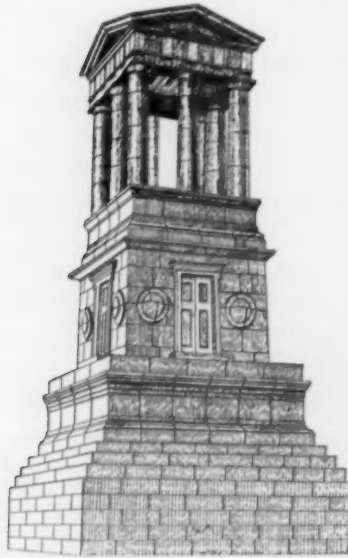


Fig. 9. Monument at Souma in Algeria, as restored by M. Ravoisier.

Mr. Falkener's opinion, is the tomb of Micipsa, king of Numidia, who died B.C. 118. It is known from Strabo that Micipsa greatly enlarged and adorned Cirta, and established a Greek colony there.<sup>b</sup> Whether or not the Souma monument really covered the remains of the king, and whether or not its artistic character was due to the new settlers, it is certain that, if the restoration be authentic, it displays a propriety and purity of design not unworthy of the best age of Greece; and if its form was really suggested by the Mausoleum, the adaptation of the original idea shows both taste and skill. Its principal parts are: (1.) A bold spreading basement, of which the middle division consists of three gradines, contracting inwards as they rise, so as to form the lower part of a truncated pyramid; (2.) A podium, with doors, real or false, on each side, within which was doubtless the sepulchral chamber; (3.) A square

open pteron, formed by a cincture of eight columns, so arranged as to present on each front a tristyle façade of the Doric order, surmounted by a low pediment. There is no pyramid above, but the combined pediments form a quadripartite canopy or baldaquin over the pteron. In this pteron then we have the

closed with marble panels." But Choiseul-Gouffier denies that there are any indications of panels or screens between the columns. Chandler's belief was founded on the vertical bands to be seen running down the middle of the shafts on each side, which implied, in his opinion, that the columns were connected by intervening panels. Such panels, however, must at any rate have been limited to the lowest part of the intercolumnar space, like *plutei*, or modern parapets; for the perspective view of the monument, both in the Dilettanti Society's publication and in Choiseul-Gouffier's, sufficiently shows that the upper or fluted part of the shafts was disengaged and free all round.

<sup>a</sup> *Museum of Classical Antiquities*, i. 173.

<sup>b</sup> *Berum Geographicarum lib. xvii. c. 3, § 13.*

same distinctive and typical feature as at Mylassa, conforming adequately to all the four conditions here laid down.

3. The third monument is stated by Mr. Falkener to have been discovered by him at a place called Ooran in Phrygia, not far from the remains of Laodicea ad Lycum.<sup>a</sup> Though this is much further than Mylassa from Halicarnassus, it is still near the confines of Caria, and quite within the region of Asiatic Greek art. The architect of the building, therefore, would probably have been well acquainted with the Mausoleum. There is no proof beyond its general form that the monument was sepulchral, nor any direct evidence to determine its date, for the inscriptions represented in Mr. Falkener's plate are imaginary decorations; but the architectural design, if correctly restored by him, exhibits by no means a debased style. Judging from the basreliefs roughly outlined in the accompanying illustration (Fig. 10),<sup>b</sup> I should be inclined to attribute it to the age of the Seleucidæ.

Unfortunately the roof and pyramid had been lost, and the basement was buried in the earth, at the time of Mr. Falkener's visit in 1844; so that his restoration, though appropriate and tasteful, must be admitted, as a whole, to be conjectural. The pteron, however, which, in our point of view, is the most important feature, was happily still standing. It is, like the two preceding examples, open and permeable both to air and view. But it is oblong in plan, instead of square; and its area is surrounded not by columns, as at Souma, nor by columns and pilasters jointly, as at Mylassa, but by six square and massive piers. The reason of this doubtless was that the weight of the pyramid they were designed to carry was greater than that of the superstructures in the other two buildings. The artist has availed himself of the exceptional thickness of the piers to sculpture the faces both of their fronts and



Fig. 10. Monument at Ooran in Phrygia, as restored by Mr. Falkener.

<sup>a</sup> *Museum of Classical Antiquities*, i. 174.

<sup>b</sup> This illustration, which is copied from Mr. Falkener's, shows only the essential parts of his design, and the basreliefs are very inadequately rendered.

returns with basreliefs; so that they may be called, by analogy with the columns in the Ephesian temple of Artemis, *parastaticæ cælatæ*. This form of decoration is, as far as I know, unique. But what alone for the present concerns us is, that we have here again, under a different form, the same open, transpicuous pteron as in the two preceding monuments, found in substantial accordance with all the four required conditions.

4. It remains to describe the two buildings which I have placed last in the list of five, the derivation of which from the Mausoleum seems open to more doubt than that of the first three, from their less strictly fulfilling all the conditions by which such derivation is, in my opinion, to be tested. The first of these, seen and sketched by Mr. Falkener in 1844,<sup>a</sup> is at Celenderis in Cilicia, a town somewhat remote from Halicarnassus, and not specially connected with the province of Caria. Its architectural remains are all of the Roman period, though its coinage was, at an early date, of good Greek character. The building, of which a representation is here shewn (Fig. 11), copied from Mr. Falkener's plate, is of a late and

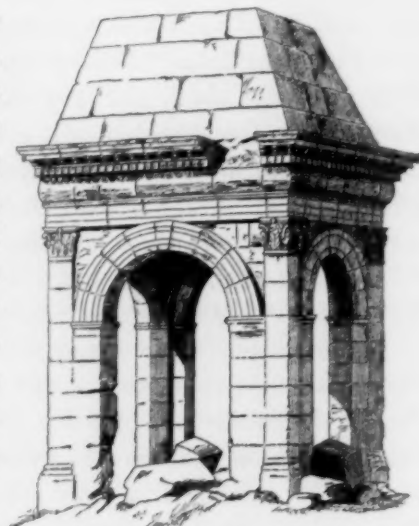


Fig. 11. Monument at Celenderis in Cilicia.

rather debased style. It is evidently monumental, and probably sepulchral. It has no basement visible above the ground, but it shows a perfect pteron, and a pyramid above, of which the upper part only is lost. That which connects it with the three preceding examples is the entire openness of the pteron. But that which throws doubt on our right to treat it as an imitation of the Mausoleum is the principle on which that pteron is constructed. The Mausoleum, Pliny tells us, was surrounded by thirty-six columns. The façades in which these columns were arranged must each have had, under the Greek system, horizontal entablatures, whose weight was evenly distributed over a series of vertical supports or props. The three monuments already described are all constructed on this principle, and their difference from the Mausoleum is merely a difference in the number of vertical props, arising from the difference in the size of the buildings. But in the Celenderis monument this constructive principle is mixed up with

<sup>a</sup> *Museum of Classical Antiquities*, 188.

another essentially different. By means of four semi-circular radiating arches, connecting the pilasters at each angle of the pteron, and themselves resting on jambs which combine with the pilasters to form four solid piers, the weight of the roof and pyramid is thrown altogether on these composite supports at the angles, an arrangement obviously incompatible with the use of any intervening vertical props, and therefore incapable of being extended into the colonnades of a large peripteral building. The principle is in fact the same as in the Albert Memorial in Kensington Gardens, a monument similar to the Mausoleum in motive, and not, as I think, altogether dissimilar in general composition, notwithstanding the difference of styles, but whose pteron is constructed on a mechanical principle quite diverse from that observed at Mylassa, Souma, and Ooran. A structure of which the roof rested on supports limited to the angles, and was connected with those supports by radiating arches, could not by any process known to Greek architecture be expanded into a building surrounded by thirty-six columns, nor can it therefore be fairly recognised as a reduced copy of such a building. Consequently, though the Celenderis monument satisfies our first and second conditions, I cannot consider it sufficiently reconcileable with the particulars of Pliny's account to satisfy the third and fourth.

5. Lastly must be mentioned the beautiful, and still nearly perfect, monument at Glanum, the modern St. Remy, in Provence.<sup>a</sup> This building, which may possibly have been a tomb, but more probably only a cenotaph, appears from its inscription to have been dedicated by Sextus, Lucius, and Marcus, Julii, to two of their male relatives.<sup>b</sup> It is not to be concluded from the name that these persons were members of the great Julian family: more likely they were Gallo-Romans, whose progenitor had obtained the Julian name by adoption. Nevertheless, the style of the architecture, and the orthography of the inscription, seem alike to refer the building to the first century after our era (Fig. 12). The dimensions of the monument are loftier, and the composition more varied and ambitious than any hitherto described. It consists of three divisions:

(1.) A square basement, adorned on each face with bas-reliefs representing martial scenes.

(2.) A square pteron, with wide arched openings on each side, the arches supported only by piers at the four angles.

<sup>a</sup> Illustrated with large plates in the *Antike Denkmäler der Deutschen Archäologischen Institut*, i. Part 2, Berlin, 1887.

<sup>b</sup> The inscription is: SEX. L. M. IVLII. C. F. PARENTIBVS. SVEIS.

(3.) A super-pteron, that is, an upper story in the form of a second pteron, but circular in plan instead of square, thus resembling what Vitruvius



Fig. 12. Tomb at St. Remy. (From Fergusson's *Handbook of Architecture*, vol. i. p. 347.)

calls a *tholus*, or monopteral temple. It is composed of a cincture of ten columns, enclosing a space occupied only by two statues, representing the persons for whose glorification the building was evidently erected. Above the columns is a canopy, in the form of an entablature surmounted by a low cone. Probably, no ancient structure still surviving is better entitled to the description of *Aere vacuo pendens*, and certainly its crowning feature might without inaccuracy be said to contract itself into a *metæ cacumen*. Whether its design, however, was directly suggested by that of the Mausoleum seems open to doubt. It is not merely that its pteron proper is constructed, like that at Celenderis, on a principle unknown in autonomous Greek architecture, which does not admit of adaptation by mere horizontal expansion to a Greek

peripteral building. But the highest story, or super-pteron, though free from this objection, is almost identical in form with certain monuments in European Greece still existing in Roman Imperial times, which might, some of them, probably have been known to the architect at Glanum, and which were on a scale better suited for his imitation than the Mausoleum. Thus at Corinth was the herōon of Palæmon, in which a circle of columns, strictly monopteral, surrounded a statue of the hero on his dolphin, open on every side to view, and which only differed from the Glanum monument in being covered by a dome instead of a cone. This building was still standing in the latter half of the second century, as appears from a coin of Lucius Verus,<sup>a</sup> and therefore certainly at the date of the erection of the monument at Glanum. At Sicyon also Pausanias relates that he saw several tombs which seem to have been of the same form, judging from the following words: Λίθου ἐποικοδομήσαντες κρηπίδα κίονας ἐφιστᾶσι, καὶ ἐπ' αὐτοῖς ἐπίθημα ποιοῦσι, "having built up a podium of stone, they place columns upon it, and upon these make a canopy."<sup>b</sup> Such buildings are

<sup>a</sup> It is a middle-brass coin published, from a specimen in the British Museum, by Prof. Donaldson, *Architectura Numismatica*, fig. 15.

<sup>b</sup> Pausanias, ii. c. vii. 3.



represented on various Sicyonian coins of Septimius Severus, Caracalla, and Plautilla, and have been illustrated and explained by Professor Gardner in the *Journal of Hellenic Studies*.<sup>a</sup> The coins show in each case a monopteral shrine or *naidion*, with a canopy supported, as Mr. Gardner points out, by columns alone, without any walls, and with a statue in the centre. This is exactly the form of the super-pteron at Glanum, and the architect of that monument may therefore be supposed to have seen and imitated the design represented on the coins, without going so far afield as Halicarnassus. Whether or not the Sicyonian monuments may themselves have been derivatives from the Mausoleum it would be hazardous, with the slender evidence now remaining, to attempt to decide.

On the whole I incline to reckon the monument at St. Remy, and perhaps also that at Celenderis, among those productions of a Roman age which were indirectly influenced by the Mausoleum rather than distinctly imitated from it. It is hardly likely that, in days when printing did not exist, architectural delineations or minute technical descriptions of the Halicarnassian tomb, though perhaps to some extent accessible to the learned through the treatise of Satyrus and Phyteus, or the *De Septem Miraculis* of Philo of Byzantium, could have been in such general circulation as to furnish models for copying throughout the Roman provinces. But if the pteron of the Mausoleum may be rightly conceived as an elevated upper story, constructed to display an iconic statue under a canopy resting only on columns, pilasters, or piers, which were so placed as to allow an unobstructed view of the statue from each of the four cardinal points, then such a striking and previously unknown arrangement would naturally be celebrated throughout the ancient world, and its openness, altitude, and aerial lightness would be talked of as the characteristics which chiefly produced its renown. These characteristics the architect at Glanum might have emulated in his much smaller, but still elaborate design, even though he was ignorant of the exact manner in which they were displayed in the original monument, and content to trace their development through the later modifications, adapted to less magnificent buildings, with which he was familiar.

It is somewhat singular that the three learned writers, from whom the several preceding illustrations have been borrowed, should all have confined themselves to mentioning, or briefly describing, the monuments which they think may throw some light on the form of the Mausoleum, without in a single instance attempting to point out what is the particular light they throw, or indeed to draw any

<sup>a</sup> Apr. 1885, p. 77.



inferences of a practical nature from them.\* Not one of the three, so far as I can see, has at all regulated or qualified his restoration of the building by adopting a single feature from any of the so-called *exempla* (as Mr. Fergusson entitles them) which he cites in illustration of it. To me, however, it would appear that, if any benefit is to result from an examination of the monuments which have the best claim to be considered imitations of the Mausoleum, it must be by noting what particular features of the Mausoleum the architects of those monuments have apparently imitated or reproduced. Now no inference from the monuments, taken by themselves, seems to me more clearly indicated than this: that the Pteron, or principal story of the Mausoleum, must have had no *cella*, nor any long continuous wall within its peristyle, but must have been open internally to air and view. If this be the manifest indication of the monuments, let us turn to our other fountain of authority, the testimony of the ancient writers already quoted on this cardinal point. The result is practically the same. Neither in Pliny, nor any other author, is to be found the slightest reference, direct or indirect, to a *cella* within the peristyle; whilst the words of Martial, if they apply at all to the Pteron, are virtually in contradiction to such an idea. Failing, then, both classes of evidence, monumental and literary, let us simply appeal to reason, and consider whether, in such a building as we know the Mausoleum to have been, it is likely or unlikely that there would have been a *cella* in the highest story. The *cella* of a temple was intended for religious rites, as also for the preservation of articles of sacrificial use, and sometimes of public treasure; and it was necessarily on the lowest, because in a temple the only, floor. The *cella* of a large sepulchral building was used for *Enagismata*, or other funeral rites; and opening out of the *cella*, where the building gave sufficient space, were smaller chambers, sometimes also *loculi* smaller still, for preserving the remains of the dead. In the Mausoleum, as we know from De la Tourette's account, there was on the lowest floor a "large and fine" apartment, which was, to all appearance, fitted to every purpose of a *cella*. There was also on the same floor a sepulchral chamber, which was entered by the Rhodian knights; and probably other chambers, of which they have left no record. Thus all the uses of a *cella*, with its adjoining apartments, were provided for in the basement. What, then, could be the motive or meaning of adding a second *cella* 50 or 60 feet above? No hint has been given by any of my predecessors in the discussion, who unanimously assume the existence of this upper

\* It is perhaps not less singular that Herr Petersen should have altogether ignored this branch of the investigation, making no mention whatever of any of the existing monuments supposed to illustrate the Mausoleum.

*cella*, of the use to which they would apply it, though Sir Charles Newton and Mr. Pullan, who have published the section, reproduced on a preceding page, of two beehive-shaped *cellæ* exactly alike, one above the other, must surely have considered this question. Formidable as it is to find myself in opposition to so many eminent authorities, I feel bound frankly to avow my conviction that this upper *cella* is merely a dream of modern restorers. The Greeks were not a people of one idea. They did not, like so many of their modern interpreters, suppose that because the normal form of a temple, the form indeed under which they succeeded in erecting the most beautiful building remaining in the world, was a *cella* within a peristyle, therefore every peripteral structure must of necessity enclose a *cella*, whatever its position, motive, or use. Nor did they suppose that, because the roof in a peripteral temple was supported by a *cella*, it was therefore indispensable to provide a *cella* to support the roof in every peripteral building. Where it was for any reason undesirable to have a solid enclosure within a peristyle, the Greeks would have known how to substitute inner rows of columns, pilasters, or piers, sufficient to carry any intended superstructure. As, then, the supposition of a *cella* in the highest story of the Mausoleum seems in itself at variance with probability, and as it is unsupported by any positive, and opposed to all the negative, evidence, whether literary or monumental, which we possess, I must conclude, both on *à priori* and *à posteriori* grounds, that it is untenable. It has, I believe, obtained its acceptance hitherto chiefly because it seemed to offer a solution of a difficulty involved in one of the measurements recorded by Pliny, for which, however, I purpose hereafter to submit, under its proper head, a different explanation.

#### C.—CONCLUSIONS FROM THE EVIDENCE.

It is now time to formulate the joint results of the investigations carried on under the two preceding heads (A and B) of the present inquiry. The following propositions appear to me to be established by the combined evidence as clearly as the nature of the subject will admit. They are stated in an order corresponding to the succession of the parts of the Mausoleum to which they apply, ascending from base to summit.

I. The building was elevated upon a lofty flight of steps or gradines, continued on all four sides, which is referred to by Pliny as the *pyramis inferior*, and which was discovered by the Knights of Rhodes standing *in situ*, the upper part partially open to view, the lower part buried in the earth.

II. Within this lower pyramid was the true *cella*, with a sepulchral chamber adjoining; and this *cella* was neither circular, as represented by Mr. Pullan, nor divided into three aisles by columns, as represented by Mr. Fergusson, but square, and internally open, as seen and described by De la Tourette.

III. The Pteron, which was the characteristic story, specially expressing the artistic motive of the whole monument, was of an open construction, which left the interior visible from all four sides, the roof or canopy being supported merely by columns, pilasters, or piers, arranged so as not to obstruct the view into and through the whole.

IV. The Pteron had, externally, some marked structural feature, which distinguished its fronts from its sides.

V. The highest part of the building was originally a perfect pyramid, equal in height to the lower pyramid, composed of twenty-four steps, and terminating in an apex like the apex of a meta; but it was truncated by Pythis to make a platform for his quadriga, and thenceforth was of less height than the lower pyramid, and had less than twenty-four steps.

These five propositions form the cardinal principles by which the restoration here attempted will be governed. Other statements will have to be made, and other inferences suggested, some with more or less confidence, some with admitted doubt, some with alternative applications. On any one or all of these statements and inferences I am freely open to correction, if favoured with the criticism of more able or learned investigators. For any or all of them I will readily substitute any amendments offered in free discussion, which may be supported by proofs, or even by probabilities, stronger than I am able to adduce for my own theory. But the five cardinal propositions must stand as pillars of the scheme; and, if they fall, the whole superstructure must collapse with them.

Here then closes the first part of the present inquiry. On a future occasion I hope to be permitted to explain the application of the five propositions here laid down to the restoration I desire to submit to the Society, and to illustrate that restoration by plans, elevations, and sections, with tables of measurements and proportions, so as to bring the soundness or unsoundness of the propositions themselves to a test which may be judged of by all. This will be followed at a later date by an examination of the second principal question stated at the beginning of this essay, namely, what was the most probable arrangement of the chief sculptures of the Mausoleum which have been preserved to us, an examination which will, I trust, be less tedious and technical than that which the first or architectural question has necessarily involved.

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Part II. Read June 21, 1894.

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D. PROPOSED RESTORATION.

The way has been cleared by the arguments and illustrations submitted to the Society in my former paper for the scheme which I have now to offer in reply to the first and principal question of the present inquiry, namely, what was the architectural form of the Mausoleum? I proceed then to describe the chief features of the restoration here proposed.

Before entering into the details of this restoration, however, certain explanations must be made; firstly, as to the principle of measurement here adopted, and secondly, as to the manner of determining the dimensions and location of that architectural member which chiefly governs the proportions of the principal story or Pteron; the column, I mean, of the order.

1. In accordance with long-established architectural usage the diameter of the column at the bottom of the shaft is here used as a modulus for all the dimensions of the building immediately connected with the principal order. I am aware that Mr. Fergusson has thrown discredit on this practice by the following statement:<sup>a</sup> "Mr. Watkiss Lloyd has proved that the time-honoured doctrine of the Vitruvian school—that the lower diameter of a column was the modulus of every other part of a building—had no place in Greek art." Now, it happens that none of Mr. Lloyd's published writings on this subject make mention either of the "Vitruvian school," or of their "time-honoured doctrine."<sup>b</sup> Nevertheless, I am bound to mention that Mr. Lloyd himself informed me in a private and friendly communication that he accepted the virtual responsibility for this somewhat sweeping statement, having, in fact, discussed the subject orally with Mr. Fergusson in his lifetime, and expressed to him the opinion that the system

<sup>a</sup> *Mausoleum, etc.*, 17.

<sup>b</sup> Those writings consist only, so far as I know, of (1), a paper on "Architectural Proportion," read at the Institute of Architects in 1859; (2), a dissertation on the same subject in the appendix to Mr. Cockerell's work on the "Temples of Ægina and Phigaleia"; (3), a memoir in the appendix to Part IV. of the Dilettanti Society's *Ionian Antiquities*; (4), a paper in the *Builder* of 30 Aug., 1890, on the "Principles of Proportion in the Parthenon." It is with sincere regret that I now refer to Mr. Lloyd, who since my earlier paper was read to the Society has passed away from us. Though ignorant of the details of my scheme, he had expressed friendly interest in its future development, and was always ready to assist me from the resources of his multifarious knowledge.

of the Vitruvian modulus was incompatible with his (Mr. Lloyd's) demonstration of the proportions exemplified in Greek temples. Whether the circumstance that a system, accepted in great part by architectural critics from time immemorial, was incompatible with an ingenious theory of proportion recently propounded by Mr. Lloyd, should be accepted as sufficient proof in itself of the fallacy of that system, may be open to question. But in any case it may be pointed out that Mr. Lloyd's demonstration of proportions is drawn solely from the measurements of Doric temples in European Greece built in the fifth century B.C.; and, therefore, to apply it, as Mr. Fergusson does, to an Ionic building of the fourth century in Asia Minor involves an extension of Mr. Lloyd's theory neither logical in itself nor justified as yet by any independent evidence from without. I will not, however, insist on this objection; for I am quite ready to admit the probability that the main principle of this theory, that is, the observance of ratios of low numbers between all such contiguous parts of a building as could be easily compared, both in what Mr. Lloyd terms "rectilinear" and "rectangular" proportion, would be found to apply to all Greek architecture of the best period, of whatever style, and in whatever locality. In accordance generally with that principle the present restoration has been prepared, as will be shown in detail by the tabular statement hereafter given of the dimensions of the principal parts of the building, and the proportions they bear to each other. But it must be permitted me to dissent from the general interdict pronounced by Mr. Fergusson, on the authority of Mr. Watkiss Lloyd, against the so-called doctrine of the Vitruvian modulus, as having no foundation in Greek art. That doctrine has, in my opinion, been much misunderstood both by these and other writers.

In the first place, it has been regarded as a contrivance invented by Vitruvius for an architectural system of his own. But the treatise of Vitruvius is really founded upon the writings of Greek authors extant in his time, of whom he mentions seventeen by name in the Preface to his Seventh Book; and his descriptions of Greek buildings, with the theories of proportion involved in them, are taken not from his own observation (for he seems never to have been in Greece or Asia Minor at all) but from the accounts written in most cases by the architects themselves, which were then still extant and accessible to him, though sometimes, it may be, not correctly understood by him. The system of comparing the principal parts of a columnar ordinance with the lowest diameter of the column is most fully developed by Vitruvius in his explanation of what he calls the "eustyle species of temples," in which the



columniations were three diameters and a quarter in width.<sup>a</sup> This "species," meaning thereby this scheme of proportion, was, as he tells us, introduced by Hermogenes of Alabanda,<sup>b</sup> the inventor of the pseudodipteral arrangement of peristyles, and the architect of the temples of Diana at Magnesia, and Bacchus at Teos, whose own description of those buildings was extant when Vitruvius wrote. The first and most natural inference therefore is that Vitruvius found both the explanation of the eustyle system of proportion, and the use of the diameter as a medium of comparison, as a modulus or *ἐμβάτης* (the Greek name which he quotes) in the now lost treatise of Hermogenes. The Magnesian Temple of Artemis, which we know from another passage to have been pseudodipteral, was apparently also eustyle; and the second and equally natural inference from the Vitruvian account would be that this temple was designed by Hermogenes so far in measured conformity with the lowest diameter of its columns as to allow of that diameter being used as a modulus for testing all its proportions. The era of Hermogenes is not known to us on any direct authority. Dr. Hirschfeld places him conjecturally in the first half of the second century B.C.; but on no more conclusive ground than that the worship of Dionysus was actively revived at Teos in B.C. 193, and that this would therefore furnish a likely date for the temple of that deity which Hermogenes built.<sup>c</sup> On the other hand, Professor Cockerell, in his introductory account of the "Temple of Zeus at Ægina" (p. 16), assigns to this architect the date of *circa* B.C. 570, on grounds equally historical, though also equally conjectural, with those of Dr. Hirschfeld. Mr. Fergusson, who has published a full technical description of the Temple of Apollo Smintheus in the Troad, which, being pseudodipteral in arrangement, must have been posterior to Hermogenes, attributes it to the century preceding Alexander the Great, that is, from 436 to 336 B.C.<sup>d</sup> As Mr. Fergusson's judgment as an architectural critic seems entitled to more weight than the mere historical conjecture of Dr. Hirschfeld, itself in opposition to the conjecture, equally well or ill founded, of another eminent authority, I conclude for the probability that Hermogenes lived at least some time before the middle of the fourth century B.C. If then, as already suggested, Vitruvius found his exemplification of the *ἐμβάτης*, or modulus, in the treatise of Hermogenes, and if the architectural invention of Hermogenes was reproduced in a building erected during the

<sup>a</sup> Lib. III. c. ii. s. 28, 29.

<sup>c</sup> *Archæologische Zeitung*, 1876, p. 29.

<sup>b</sup> *Eas symmetrias constituit Hermogenes*, s. 29.

<sup>d</sup> *Dilettanti Society, Ionian Antiquities*, part iv. p. 41.



century preceding 336 B.C., there would be no anachronism in supposing that the system of measurement he introduced might have been used by the architects of the Mausoleum in or about 350 B.C. But whether or not that system originated with Hermogenes, and whether its first use dated from before or after the era of the Mausoleum, the assertion that "it had no place in Greek art" is equally irreconcilable with the most fair and natural interpretation of the only historical testimony existing on the subject.

In the second place an undue weight has been attributed, both by Mr. Fergusson and by others, to the modulus in question, as though it was intended to embody in itself the germs of all architectural proportion. But there is nothing in the language of Vitruvius to call for such a supposition. He nowhere asserts that all the dimensions of a building should be evolved from the diameter of the column as an organic and primary law.<sup>a</sup> On the contrary, he gives, in the case of the column itself, different and independent reasons which should govern its height, quite irrespective of any ratio to the diameter; such as, the absolute magnitude of the whole building, the proportionate width of the intercolumns, and the like; and, in the case of the architrave, he varies its height, not according to the diameter of the column, but according to the column's absolute height, to the elevation of the architrave itself above the eye, and other similar considerations. In these and other like instances he uses the diameter, not as regulating, but simply as expressing in scientific language, the proportions of the different parts of the building, thinking it the most convenient unit of measurement for explaining their relative dimensions. Such a system in no way conflicts with Mr. Lloyd's or any other theory of proportion between the parts themselves. Its only possible inconvenience in application arises when the modulus requires much subdivision to express the exact ratio between two compared parts. But the determination of that ratio by the usual comparison of feet and inches, or of feet and decimal fractions of a foot, involves an equal complexity in expression. Vitruvius himself descends to sixths and even eighths of the modulus to describe the dimensions of certain parts of a columnar ordinance. Considering, however, the simplicity of Greek architecture, I believe that most of its ratios will be found expressible by subdivisions of the modulus by no means inconveniently minute.

<sup>a</sup> Straticò's interpretation of Vitruvius's text is the converse of Mr. Fergusson's. He concludes that its meaning is that the length of the principal façade regulated the diameter of the column, not that the diameter regulated the length of the façade. See Notes in his edition of Vitruvius, *loc. cit.* I do not, however, bind myself to this interpretation.

In the case of the Mausoleum it appears to me that, from its regular construction, no difficulty would be likely to result from a general, if not universal, application of the received modulus. The lower diameter of its columns, as determined by existing remains, was 3 feet 6 inches (Greek). The correspondence of this diameter with other leading architectural members in their *horizontal* extension is shown, not merely by its being an aliquot part of the only horizontal measurement given by Pliny (63 feet), but by its exact accordance with the dimensions of the two most important members of which specimens remain entire. For 1 foot 9 inches, or half a diameter, is the measure of the tread of the several discovered steps which belonged to the fronts of the upper pyramid, and 3 feet 6 inches, or a whole diameter, is as distinctly the measure of the horizontal divisions of the cymatium of the cornice, on which the lion's heads are separated from each other by that interval. That the *vertical* extension of each important architectural member was measured by the same modulus is not at first sight so apparent, for the only vertical dimension recorded by Pliny as belonging to the building itself, independent of its crowning sculpture, the 25 cubits which he names as representing the height of a certain part, is not a multiple of 3 feet 6 inches. The difficulty may, however, be met by an hypothesis which will not, I hope, be thought strained. Assuming, as is generally believed, that the 25 cubits were intended by Pliny as the height of the *order*, that is, of the column coupled with the entablature, I would suggest that the architects, in spacing out the vertical proportions in accordance with the given modulus, united the order with the attic above. The interposition of an attic, I ought here to explain, was needed to raise the whole of the upper pyramid into clear view, for without it the lower part of the pyramid would have been entirely hidden from below by the projecting cornice of the order. As the same obstacle would prevent the real height of the attic itself from being seen, that height might legitimately have been fixed at a figure which was not in itself a multiple of the modulus,<sup>a</sup> but which, when added to the height of the order, made up a multiple, and thus brought the most important feature in the elevation into the required conformity. In what proportion the 25 cubits of Pliny were divided between the column and entablature will be shown under the next head upon the evidence of actual remains. All the other vertical dimensions adapt themselves without difficulty to the modulus of 3 feet 6 inches, and it will therefore be assumed as the uniform standard of measurement both for length and height, and, except as to the steps of the two pyramids, the standard for breadth also.

<sup>a</sup> Cf. inf. pp. 344-5, where it is given as 11 ft. 6 in., making up, with the order, 49 ft.

2. The columns of the Pteron are supposed by me to be only  $8\frac{3}{4}$  diameters, or 28 feet 9 inches, in height. This is undoubtedly much below the proportion generally found in Ionic buildings of the fourth century. Mr. Penrose and Mr. Watkiss Lloyd have proved by careful examination of the remains of the temples of Athene Polias at Priene, and of Apollo Smintheus in the Troad, that the normal proportion of the column, at least in Asia Minor, was 10 diameters.<sup>a</sup> A nearly equivalent height, though varying in different accounts from  $9\frac{1}{2}$  to 10 diameters, has been determined for the still standing columns of the temple of Apollo Didymæus at Branchidæ. Mr. Penrose therefore felt himself justified in asserting, in a lecture at the Royal Academy, that "ten diameters is the proportion found in the best Ionic specimens."<sup>b</sup> Nor is the authority of Vitruvius at variance in any material degree with these statements. Assuming as a principle that the height of the column would increase or diminish inversely as the width of the columniation, Vitruvius determines 8 diameters as the height to be found in an aræostyle colonnade,  $8\frac{1}{2}$  in a diastyle,  $9\frac{1}{2}$  in an eustyle, the same in a systyle, and 10 in a pycnostyle.<sup>c</sup> The arrangement adopted by Mr. Fergusson in his restoration, and also by Herr Petersen, is systyle; that of Mr. Pullan is, as usual, irregular, somewhat closer than systyle, but less close than pycnostyle,<sup>d</sup> so that by the Vitruvian standard the columns in each of these schemes should have been  $9\frac{1}{2}$  diameters high, Mr. Pullan's indeed rather more. The restoration now proposed, as will be hereafter more fully explained, is on the pycnostyle system; and at first sight therefore I should have felt myself bound both by ancient and modern authority to make the columns 10, or nearly 10, diameters in height. But it must be observed that the definition of Vitruvius relates only, or at least primarily, to temples (*ædes*), and the monuments on which Mr. Penrose and Mr. Lloyd have founded their conclusions are temples exclusively. In the Mausoleum the construction of all the parts above the Pteron was so different in design from that of a temple, and the weight to be carried by the

<sup>a</sup> Dilettanti Society, *Ionian Antiquities*, part iv. Introd. 52, 55-6.

<sup>b</sup> Published in *The Builder*, 7 March, 1885.

<sup>c</sup> *In systylo altitudo dividatur in novem et dimidiam partem, et ex iis una ad crassitudinem columnæ detur: item in pycnostylo dividenda est altitudo in partes decem, et ejus una pars facienda est columnæ crassitudo. Eustyli autem ædis columnæ, ut systyli, in novem partes altitudo dividatur et dimidiam partem.* Vitruvius, *De Architectura*, lib. III. c. ii. v. 31 (ed. Stratico; cf. Wilkins in loc. cit.).

<sup>d</sup> By a somewhat singular oversight Sir Charles Newton (p. 203) describes Mr. Pullan's arrangement as aræostyle, and dwells on the advantage of the wide intercolumn thus gained for the display of statuary.

insulated pilasters immediately behind and corresponding to the columns was so much greater than that of the ordinary gabled roof, that a relatively shorter proportion for the columns would have been not only safer, but probably more agreeable to the eye, as conveying a greater sense of stability and repose. These considerations would justify an exceptional shortening of the columns in the restoration, even if only founded on theory; but they have really a stronger basis in fact. Mr. Penrose, in a letter with which he has kindly favoured me, states that he was supplied by Sir Charles Newton many years ago with the measurements of several drums of columns discovered among the ruins, which Mr. Penrose himself verified from such drums as are now in the Museum; and having compared them with the diameters of the capitals and bases which are also there, and calculated the entasis of the columns, he concluded that the columns could not have been more than from 8 to  $8\frac{1}{2}$  diameters in height. For these concurring reasons I have accepted, with a slight variation to be explained presently, the comparatively stunted proportion adopted by Mr. Pullan, and apparently followed both by Mr. Fergusson and Herr Petersen. In consequence, I find no difficulty in understanding the 25 cubits of Pliny as the height of the order of the Pteron, which, had the normal proportion of 10, or even  $9\frac{1}{2}$  diameters been adopted, would have been quite impossible.

If then 25 cubits, or 37 feet 6 inches, was the height of the whole order, the exact height of the column to an inch may be left to depend on the previous determination of the height of the entablature from the portions of it which have been discovered. In investigating this last point I must rely on the detailed measurements given by Mr. Pullan in the plates to Sir Charles Newton's work. As an unprofessional person, I should not myself have presumed to question their correctness. Mr. Fergusson, however, has commented somewhat severely both on the absence of scales for measurement in the plates, and on the unusual system of notation, by which Mr. Pullan has adopted, in the subdivisions of a foot, decimals of the foot in lieu of inches and decimals of the inch. The difficulties of the reader, it may be added, are aggravated where, as in Plate XXII., he finds the figures lithographed in a manner which does not accord, as far as I can discover, with any system whatever. The heights of the three members of the entablature are there printed in the following form:

Architrave	.	.	.	.	.	3'3.9
Frieze	.	.	.	.	.	2'9.3
Cornice	.	.	.	.	.	2'4.88

It is thus impossible to say positively whether the architrave, for example,

is meant to be 3'3"9 in height, that is, 3 feet 3 inches and 9 tenths of an inch, or 3'39, that is, 3 feet and 39 hundredths of a foot; whether, in fact, the lithographer has omitted the proper mark of inches over the second 3, or has gratuitously inserted a point between that 3 and the 9. On the whole, considering that Mr. Pullan's usual practice is to give only the decimals of a foot and to exclude inches, I have thought it safest to conclude that the corresponding notation was intended here, and that the error of the lithographer lay in the insertion of the second point. On this supposition the height of the whole entablature, as measured by Mr. Pullan, was really as follows:

Architrave	.	.	.	.	.	3'39
Frieze	.	.	.	.	.	2'93
Cornice	.	.	.	.	.	2'488
						<hr/>
Total	.	.	.	.	.	8'808

This is equivalent to a small fraction above 8 feet 9 inches. As then Mr. Pullan's measurements were taken of course with English instruments, and as the small fraction would naturally express the difference between English and Greek measures for that length, the 8'808 here arrived at may be assumed to represent 8'75 Greek, that is, 8 feet 9 inches, a dimension which is exactly equivalent to two and a half diameters or modules. Having therefore accepted the 37 feet 6 inches of Pliny as the height of the entire order, it results that we have 28 feet 9 inches remaining as the exact height of the column. This is equal to eight diameters and three-fourteenths, or one-fourteenth less than the height adopted by Mr. Pullan.

Next, we have to ascertain the relative position of the columns; in other words, the width of the columniation, which is the chief determining factor of the length and breadth of the building. Among the architectural remains in the British Museum there are two recurring members which throw some light on this question, first, the portions of *lacunaria* from the ceiling of the peristyle, or some other part of the Pteron; and second, the lion's heads from the cymatium of the principal cornice, which are spaced, as already stated, at intervals of 3 feet 6 inches. The portions of *lacunaria* are so few and broken, that I should hardly have ventured by myself to draw any conclusion from them. But the late Professor Cockerell brought his great technical knowledge to the elucidation of these among other discovered parts of the building, and, as is well known, arrived at the conclusion that the proportions of these *lacunaria* pointed to a columniation of



8 feet 9 inches, or two and a-half diameters in width.<sup>a</sup> The indications to be drawn from the lions' heads depend on the view taken of the relation they bear to the arrangement of the columns below them. Vitruvius says that a lion's head should be over the centre of every column. Mr. Fergusson has followed this rule in his restoration, with which indeed, from the exact equality of the diameters to the spaces between the heads, it naturally falls in; and having made all his columniations, except at the angles of the building, equal to three diameters, or 10 feet 6 inches, and the intercolumns equal to two diameters, he has, besides the lion's head over each column, placed two others over each space between them. Mr. Pullan, who here, as elsewhere, seems a votary of latitudinarianism, disregards the supposed necessity of bringing his columniations into any conformity with the position of the lions' heads, and has made them 10 feet wide, or 6 inches less than three diameters.<sup>b</sup> There is unfortunately, so far as I know, no ancient building remaining in sufficient integrity to show authoritatively either the application of the Vitruvian rule, or its modification or abandonment in practice by the architects of the best age. But to me it seems incredible that the complete and scientific symmetry of a Greek colonnade should ever have been marred by the discordance of two members so easy to harmonise as the two members in question, except

<sup>a</sup> Mr. Cockerell's conclusion is reported by Mr. Fergusson, *Mausoleum, etc.*, 36. Since this paper, however, has been in hand, a *lacunar* stone has been partially restored and set up by the Museum authorities in conjunction with a restored column. If this location of the stone be strictly adhered to, it would certainly involve a wider columniation than 8 feet 9 inches, with an intercolumn of only 5 feet 3 inches. If, however, the stone be taken separately from the column, it may be supposed to have belonged to the ceiling over one of the four central openings in my design, which, as explained in the text, are adapted to columniations of 10 feet 6 inches and intercolumns of 7 feet. In the peristyle these openings have a transverse dimension corresponding to the general intercolumn, which leaves only 5 feet 3 inches in the clear. But in the inner ambulatory, running between the great piers and the insulated pilasters in front of them, there is a space corresponding to a columniation of 10 feet 6 inches, leaving 7 feet in the clear; for the face of each great pier is kept back by 1 foot 9 inches, so as to form a line which, if prolonged, would strike the centre of the outside column of the portico or of the side colonnade, just as, in the Parthenon and several other temples, the side walls of the *cella* are kept in a line with the centres, not the outsides, of the corresponding columns in the fronts. Thus the four central spaces in the inner ambulatory would each be ceiled by a *lacunar* stone corresponding to columniations of 10 feet 6 inches, with 7 feet each way in the clear, which is about the dimension of the restored stone in the Museum.

<sup>b</sup> *A History of Discoveries at Halicarnassus, etc.*, ii. 171. Mr. Pullan's justification of this is that he found a lion's head at only 1 foot 9 inches from the extreme end of the cymatium, and this of course could not have been over the centre of a column. But it might very well have been over the outer edge of a column, as it was at Priene (see Canina, *Architettura Greca*, *tav. xxx.*), and it is accordingly so placed in the present restoration.



where some evident architectural motive justified the irregularity, and removed from it the appearance of carelessness. I prefer to adhere to the *principle* embodied in the rule of Vitruvius, though varying the form of its application according to the requirements of the particular case, keeping, that is, the position of the lion's heads always in some calculated correspondence, whether fixed, or varying by an easily understood law, with the position of the columns. These heads, in the Mausoleum, were separated from each other by intervals of one diameter. The columniations therefore, to be in harmony with them, should be either three diameters in width, which allows of a head over each column, or two and a-half diameters, which allows of a head over every alternate column; and this last is the arrangement actually found in the Ionic colonnade of the south-west building at Olympia.<sup>a</sup> Two and a-half diameters, or 8 feet 9 inches, is, as already stated, the columniation preferred by Professor Cockerell for the peristyle; and, as it is also exactly equal to the height determined for the entablature, we may, by adopting it, obtain an example of what Mr. Watkiss Lloyd calls "rectangular proportion." This columniation distinguishes what Vitruvius calls the "pyncostyle system." It was approximately, if not exactly, that of the Temple of Apollo at Branchidae, as well as of Apollo Smintheus in the Troas. But its peculiar appropriateness for the Mausoleum arises from the unusual weight of the pyramidal roof, which called for an unusual closeness in the columnar supports, and in the insulated pilasters behind, which corresponded to them. On these combined grounds I have adopted the pyncostyle columniation generally in the present restoration, but with one exception, which is suggested by the architectural motive of the Pteron itself. That motive was to form a kind of panopticon at the centre of a group of architectural piers, where the *eikon* of the deceased dynast would form the cynosure of eyes looking from each of the four points of the compass. To assist the view of this *eikon* from without, and to distinguish the central or most important opening from those at the sides, exceptional width should be given to the central intercolumn in each of the surrounding colonnades; and I have therefore added to it 1 foot 9 inches, or half a diameter, both at the fronts and sides of the building. This wider central opening, where the motive for it is obvious, is authorised by ancient practice. In *propylaea* it was almost, if not quite, universal. Vitruvius even recommends it for the fronts of Ionic eustyle temples, to facilitate both the view of the *eidolon*, and the access of worshippers. In Doric temples it appears from existing remains to have never been adopted; but the Doric ruin at Thoricus, which seems, both on this and other grounds, not

<sup>a</sup> See *German Excavations at Olympia*, part iv. Pl. xxxviii. and part v. Pl. xliii.

to have been a temple, has a wider intercolumn in the middle of its longest side.<sup>a</sup> Among Ionic remains the most important examples of this arrangement are to be found in the temples of Artemis at Ephesus,<sup>b</sup> and of Rhea at Sardis.<sup>c</sup> The porticoes of these two magnificent buildings exhibit a further and exceptional refinement in the columniations, which are made to diminish continuously in width from the centre to the sides. In the present restoration the advantage of improving the view of the colossal monumental figure is obviously a sufficient motive for enlarging the central opening; but the continuous diminution in the width of the side openings would, with such porticoes as here introduced, be manifestly out of place.

We may now proceed to the description of the building, as restored in the present design. It will be best to begin with the base, and ascend continuously to the summit.

1. The entire area of the monument, so far as the explorers could determine it from the cutting of the rock below, has been given by Sir Charles Newton at 127 by 108 English feet.<sup>d</sup> The unevenness of the level, however, and the effacement of the bounding line in great part of the foundations, must have made any measurement of the area difficult; and possibly, as Mr. Fergusson suggests, the excavators did not at the time attach any cardinal importance to the exact extent of the two dimensions they were measuring, and their ratio to each other, and did not therefore ascertain them with any especial care. I agree with Mr. Fergusson that the true measurement would more probably have been 127 feet 6·75 inches by 106 feet (English), which is equivalent to 126 feet by 105 feet (Greek), or in the ratio of 6 to 5.

Upon foundations of these dimensions was raised the lower Pyramid, the existence of which we have before identified from the narrative of De la Tourette. The height of this pyramid is stated by Pliny to have been equal to that of the upper pyramid, which will presently be shown to have been originally 24 feet 6 inches. But the number of the steps composing the lower pyramid is not given by Pliny; nor is the extent to which this pyramid was gradually contracted in its ascent anywhere recorded; neither can its slope be calculated from any of the remains of the building now in our Museum. We are consequently left to settle these details in the manner most consistent with the general scheme we may

<sup>a</sup> Dilettanti Society, *The Unedited Antiquities of Attica*, ch. ix. Pl. i. p. 57.

<sup>b</sup> Wood's *Ephesus*, p. 268, and Plan, p. 262.

<sup>c</sup> Canina, *Architettura Greca*, tav. xli.; Dilettanti Society, *Ionian Antiquities*, part iv. Introd. 15.

<sup>d</sup> *A History of Discoveries at Halicarnassus, etc.*, ii. 270, n. 39.

adopt. In my design the flight of steps or gradines which the Knights of St. John discovered is supposed to rest upon a plain massive plinth, 6 feet 6 inches in height, intended both for convenience and dignity of effect. The steps themselves are made twelve in number, each 1 foot 6 inches in height. But their treads (if such a term may be applied to surfaces never intended to be trodden on) vary on the fronts and sides of the pyramid, in accordance with the different length and breadth of its base. The treads on the fronts are 10·5 inches, those on the sides 8·75 inches. Twelve of each give an aggregate of 10 feet 6 inches on the fronts, and 8 feet 9 inches on the sides; and these last figures represent the spread of the pyramid longitudinally and laterally, or the difference at each end and side between its bottom and its top. Doubling these figures, to express the same difference at both extremities, the top of the pyramid will be 21 feet less in length, and 17 feet 6 inches less in breadth, than the bottom. That is, it will be 105 feet long by 87 feet 6 inches wide at the top, which, like the 126 feet of length by 105 feet of breadth at the bottom, is in the ratio of six to five. The pyramid in my design is supposed to be broken at certain points, both on the fronts and sides, by projecting blocks, intended to obviate the monotony which would result from the uninterrupted continuance of such a lofty flight of steps all round the building. The blocks at the sides are designed to carry groups of sculpture. Those at the fronts can be better explained later on.

2. The Podium, which rises from the top of this truncated pyramid, is of necessity the most conjecturally restored member of the whole structure. Its existence is inferred from the analogy of other sepulchral monuments, and has been practically admitted by all restorers; but it is neither mentioned by any ancient author now extant, nor identified by any fragments discovered among the ruins. Its proportions must be limited in plan by the boundaries of the two stories or divisions of the building immediately above and below; and in elevation by the residue which the aggregate of the other divisions leaves in filling up the 140 feet named by Pliny as the height of the whole. In the present scheme the height of the Podium is made 28 feet, including the two steps at its top; but these steps require a few words of explanation.

It is commonly said that the *herōa* of the Greeks were raised upon two steps, in distinction from temples, which had properly three. Mr. Pullan has accordingly placed two steps between his podium and pteron, forming a kind of stylobate to his peristyle, and I have adopted the same arrangement. The upper step I have made 1 foot high, not on any actual authority, but in accordance with the dimensions of most of the steps from different parts of the building which are

now in the Museum. The lower one is ostensibly 1 foot 9 inches in height. Supposing, however, that a gutter for drainage, 3 inches deep, ran at the foot of these steps, behind the cymatium of the podium, the lower step might have been really 2 feet in height, out of which 3 inches at the bottom would have been unseen, and must therefore be omitted in all calculations of the vertical dimensions of the entire monument. There is in the Museum a block, numbered A. 25, which has a dressed front like the riser of a step, and is said in the "Guide to the Mausoleum Room" to be 1 foot  $11\frac{3}{4}$  inches in height, with 4 inches on the top dressed like a tread. I could not venture, without the evidence of other corresponding specimens, to affirm positively the position or use of this block. But certainly it would be well fitted to form part of a course such as is here suggested for the lower step. In accordance with this idea I have made the tread at the top of that step 4 inches in width.

3. The Pteron. Here we are at once guided and restrained by the description of Pliny. Let us examine his words in their order.

(A.) *Patet ab Austro et Septentrione sexagenos ternos pedes, brevius a frontibus, toto circuitu pedes quadringentos undecim.* Here is the crux which has tortured so many previous critics. How, it is said, could a building whose sides were only 63 feet long, and whose fronts still less, be 411 feet in circuit? To solve this enigma, it has been conjectured that the first two clauses of the sentence must refer to a different part of the building from the third. The former, it was at one time suggested, might be meant for the dimensions of the Mausoleum itself, the latter for those of its *peribolus*. When this was found incompatible with the discoveries of Sir Charles Newton's expedition, it was suggested that the first two clauses might relate to the central *cella* within the Pteron, the third to the peristyle. I have, however, as I think, sufficiently proved by arguments which form the basis of my third proposition, that this supposed *cella* had in reality no existence. How then do I reconcile the alleged inconsistency in Pliny's measurements? Simply by pointing out that the critics have put a gratuitous and, as I believe, unwarranted limitation on the meaning of his words. They have one and all assumed, as an axiom needing no proof, that those words imply that the Pteron must have been strictly quadrangular in plan. Yet Pliny nowhere says that it was quadrangular, nor does any other ancient writer. Neither does Pliny say or imply that the thirty-six columns which surrounded the Pteron were all disposed in four colonnades, or that those colonnades met at four angles. The whole assumption, and with it the whole semblance of inconsistency or contradiction in Pliny, originates, I believe, from

two sources: firstly, the fixed idea which underlies, however unconsciously, the conceptions of most architectural students, that every Greek peripteral building must have been designed on the plan of a temple; secondly, the indisputable fact that Pliny names only, amongst horizontal dimensions, those of the two sides and two fronts of the building. But this last fact does not make its plan necessarily quadrangular. Suppose, in describing St. Paul's cathedral church, I spoke of its north and south sides, and of its east and west fronts or ends, should I thereby imply that the church is quadrangular in plan? If I did, I should imply what is notably at variance with the truth. And so with the Mausoleum. Pliny, as I understand his words, did not mean his 63 feet to represent either the extreme length of the whole Pteron, measured alike on the north and south sides, as assumed by the earlier interpreters, or the length, similarly measured, of a certain internal compartment conceived to be a *cella*, as alleged by the later ones. He meant simply, in my idea, that the most prominent and conspicuous range of architecture in the principal story, as seen from the south or north, the feature of the exterior which first attracted the eye, and which exactly corresponded with the structural arrangements within, that is, the colonnade which flanked the Pteron, was 63 feet long, whilst the colonnade on each of the fronts was of shorter dimensions. If this interpretation be granted, we have then only to determine how the 63 feet would have been measured. The most natural mode of measuring a colonnade is from centre to centre of its outside columns, for a measuring rod or line can only be applied as a tangent to the foremost point of each column, which, to a person standing opposite, is in a line with its centre. Now it has already been explained that the columniation adopted in the present scheme is 8 feet 9 inches, with 1 foot 9 inches added to the central intercolumn, to enlarge the vista into the interior. Seven columniations of 8 feet 9 inches, plus 1 foot 9 inches in the centre of the range, make exactly 63 feet, and it results from this number of columniations that the colonnade must have been octostyle.

(B) On the east and west fronts, with the same columniation and the same central addition, we must, to meet Pliny's statement, *brevius a frontibus*, allow only five columniations, making the colonnades hexastyle, and extending them to only 45 feet 6 inches. The fourth proposition I have laid down in my former paper was, that the "fronts" must have had some marked structural feature to distinguish them from the sides. The feature employed by the Greeks to give distinction to their fronts was the pediment-headed portico, and to add to its dignity they commonly projected it two columniations, placing one column on



each return, but none in the area inside. I have, therefore, thus treated the hexastyle colonnades on the two fronts, and crowned them with pediments and sloping roofs.<sup>a</sup> But as these porticoes, owing to the double columniations at their sides, are carried over a great portion of the pyramid below, the part of the Podium which bears them has to be similarly projected, and this projection is carried down to the ground-line of the basement, interrupting the flight of gradines at the east and west ends, and serving, as I have suggested under an earlier head, to break their otherwise monotonous effect.

(C) Behind both the front and side colonnades are rows of square insulated pilasters, which, with four columns at the angles of their convergence, complete the oblong cincture of the Pteron, and correspond, in extent and plan, with the outside edge of the pyramid above. Behind these pilasters, again, are seen eight massive piers or blocks, four of them square and four oblong, arranged in a quadrangle, in accordance with the general plan; they are sufficiently substantial to carry the heavy pyramidal roof, yet all detached, so as not to interfere with the view through every part of the Pteron. Further details of the arrangement of this story will be given in the description of the interior.

(D) The last of Pliny's measurements which we have to identify in the already quoted sentence of three clauses is the *totus circuitus* of 411 feet. Assuming, as shown in the earlier part of this essay, that all the figures in that sentence must relate to the Pteron, we have only to consider what is the most natural and convenient level on which to ascertain its perimeter. Surely, it is the level of the base, which furnishes a continuous line for measurement all round. This might be taken either on the upper or lower step, and I have preferred the latter. The details of such a measurement are too complicated to be specified in the present description, but they will be found fully set out in the subjoined tables, and it will there be seen that, following the outside edge of the lower step, the perimeter amounts exactly to 411 feet.

(E) Going on with the sequel of Pliny's description, which still relates only to the Pteron, we come next to his mention of the height, *attollitur in altitudinem viginti quinque cubitis*. Here, as already stated in the preliminary discussion of the modulus and its application to the Mausoleum, I accept the usual

<sup>a</sup> In covering the inner space of the portico, no roofing stone would be needed exceeding 17 feet 6 inches in length, having 14 feet in the clear beneath it, which is 3 feet less than what Mr. Pullan requires to roof the space between the ends of his *cella* and the peristyle.



interpretation, taking the 25 cubits to refer to the order, or columns and entablature together. Of this, the most important section in the whole building, Sir Charles Newton fortunately secured many valuable remains; and by means of these the archæological staff of the Museum have lately restored and set up a portion of the original peristyle, which may be instructive to students. Having already given fully my reasons for dividing the 25 cubits, which equal 37 feet 6 inches (Greek), into 28 feet 9 inches for the column, and 8 feet 9 inches for the entablature, I have nothing further to remark on the words just cited.

(F) Lastly, Pliny adds, *cingitur columnis triginta sex*. The plan here given of the Pteron shows two octostyle colonnades at the sides, and two hexastyle porticoes on the fronts. But each of the porticoes, having columns on the returns, comprises in all eight columns. This gives thirty-two columns for the whole of the four series. By the sides of these colonnades and porticoes, at the angles of the oblong area of the Pteron, are four more columns; and these complete the number thirty-six, which surrounded the whole story.<sup>a</sup>

4. The Attic. This feature is inserted partly for the reason already stated, to clear the view of the upper pyramid from the cornice of the Pteron; but also because it is required for supplying a proper abutment to the roofs of the porticoes. That it is in itself desirable on purely architectural grounds may, I think, be presumed on the authority of two such eminent architects as Signor Canina and Professor Cockerell, who have each introduced it in his own restoration from a sense of its artistic propriety, without the additional motive which is here suggested by the introduction of the porticoes.<sup>b</sup> The height I have given to it is 11 feet 6 inches; which is determined on the principle already explained

<sup>a</sup> Mr. Fergusson has contended that the angles of the Pteron require special structural strength, and has thus justified his very abnormal contrivance of placing two, or rather three, columns at each angle, and so eking out the number in question. The Greek architects, however, who combined strict common sense with faultless taste, never resorted to exceptional supports where there was no exceptional weight to be carried. Their peripteral buildings invariably have single columns, not even square pilasters, at the angles, because, from the absence of any diagonal pressure in the superstructure, the weight was no greater at the angles than in any other part; in the Mausoleum, indeed, from the pyramidal form of its roof, it was actually less. The result of Mr. Fergusson's contrivance, so far from being, as he terms it, "æsthetically an improvement," seems to me rather to raise a sense of gratuitous incumbrance, which is distasteful in itself, as well as an acknowledged solecism in a composition purporting to be Greek.

<sup>b</sup> An attic is also inserted by Herr Petersen in his design.

in the paragraph on the use of the modulus.\* For this height, when added to the 37 feet 6 inches of the order, makes 49 feet, a figure which is a multiple of the assumed modulus, and brings all the vertical divisions of the building into harmonious proportion.

5. The Upper Pyramid. The true interpretation of Pliny's description of this crowning feature has been sufficiently explained in the earlier part of the present investigation. It may be convenient, however, to repeat his words once more: *Supra pteron pyramis altitudine inferiorem æquavit, viginti quatuor gradibus in metæ cacumen se contrahens*. These words comprise three definite statements. (1.) That this pyramid was equal to the lower pyramid in height. (2.) That it was composed of twenty-four steps. (3.) That its apex resembled that of a meta. This description, I have shown, was meant to apply to the pyramid in its original form, before it was truncated by Pythis to provide a platform for his quadriga. It remains now to explain how the original, as well as the altered, form is adapted to the present restoration. Among the most important discoveries of Sir Charles Newton's expedition was a collection of steps, found about one spot just outside the *peribolus* wall of the Mausoleum on its north side, which all evidently belonged to the upper pyramid. These steps were carefully measured by Lieutenant Smith and Mr. Pullan, who found the average height of their risers to be  $11\frac{3}{4}$  inches, whilst their treads were sloped off for drainage to the extent of  $\frac{1}{2}$  an inch, thus making the total height of each step  $12\frac{1}{4}$  inches. Twenty-four such steps, amounting in aggregate height to 24 feet 6 inches, constituted this pyramid; and in correspondence therewith the lower pyramid has, as already stated, been made 24 feet 6 inches high in this restoration. The meta-like apex of the upper pyramid is represented in the accompanying plates, so as to show its original form before the alteration by Pythis. That alteration is here supposed to have comprehended the six highest steps, which were in all 6 feet  $1\frac{1}{2}$  inch high, leaving 18 feet  $4\frac{1}{2}$  inches for the steps which remained to the reduced structure. Upon the topmost of these latter steps, originally the seventh from the apex, the artist built a pedestal of oblong plan to carry his quadriga. This transformation I have throughout spoken of, for the sake of simplicity, as a truncation of the pyramid. In appearance it certainly was so; but in reality it is perhaps more probable that Pythis would have thought it safer not to disturb the six steps, but to leave them as an unseen central support for the sculptured group above.

\* See *supra*, p. 333.

The height of the pyramid is the only one of its dimensions referred to by Pliny, and this has now been shown, both in its original and altered form. But it is essential to our purpose to ascertain with equal exactness what were the length and breadth of the pyramid's base, and the present is the most convenient place for this investigation. The dimensions in question must be calculated from the treads of the several steps now preserved in the Museum. These consist of two classes, one belonging evidently to the longer projection of the pyramid, the other to the shorter, the former running out towards its east and west ends, the latter towards its north and south sides.<sup>a</sup> Mr. Pullan, having measured the treads of each class, gives them as averaging 21 inches in the one class, and 17 inches in the other. These figures are nearly, but not quite, in the ratio of 5 to 4. Mr. Fergusson accordingly, after remarking on the difficulty of determining merely by measurement the exact original dimensions of stones of which but few specimens remain for our guidance, and those few weatherworn and in parts mutilated, proposes a slight modification of Mr. Pullan's figures, just sufficient to establish the above-named ratio more exactly. He accepts the 17 inches for the narrower step in *English* measure, but assumes the wider one to have been really 21 inches of *Greek* measure, or 21.2625 inches of *English*. To this correction I assent in substance, but think it would be more clearly expressed in form by adhering uniformly to Greek measures, which indeed I have used exclusively in my design throughout the building. These measures give 21 inches for the one tread, and 16.8 inches for the other, this latter being equivalent to 17.01 *English*, which is virtually the same as Mr. Pullan's measurement.

Examples of two other steps were also discovered, whose treads measured respectively half the preceding ones, or nearly half, for their exact dimension cannot quite be determined. Mr. Pullan has placed these at the top of his pyramid, the wider ones at the fronts, and the narrower at the sides. I, however, suppose them to be remains of the highest course of steps left by Pythis after his alteration, and to have been then covered, over half their surface, by the base of the pedestal made for the quadriga. On this supposition they formed no exception to the original uniformity of dimension in the treads, and therefore do not interfere with the calculation of the length and breadth of the whole pyramid simply from those dimensions.

At the original apex of the pyramid, then, four steps met, one from each of its

<sup>a</sup> Four or five angle-steps were also found, each combining the two classes in the treads of its two sides.

sides. However their four sections may have been adjusted, there must have been, longitudinally, two steps or parts of steps extending to 21 inches each, and laterally, two extending to 16·8 inches each. This would produce a flat top of 3 feet 6 inches by 2 feet 9·6 inches. Multiplying each of these figures by 24, the original number of the steps, we have a base of 84 feet by 67 feet 2·4 inches. The higher number represents the extreme length of the pyramid from east to west, the lower its extreme breadth from north to south, and the two dimensions, like those of the top, are in the exact ratio of 5 to 4. Upon the top itself would probably have been placed an *epithema*, perhaps a fleuron, such as on the Choragic monument of Lysicrates at Athens, erected about fifteen years later, or some other appropriate decoration; but this was of course removed when the quadriga was added.

Having now ascertained the heights of the several vertical divisions of the Mausoleum, both in its original and its altered form, we have only to sum them up thus :

	Originally.		After Alteration.	
	ft.	in.	ft.	in.
Lower Pyramid - - - - -	24	6	24	6
Podium (including two steps above) - -	28	0	28	0
Order (column and entablature) - - -	37	6	37	6
Attic - - - - -	11	6	11	6
Upper Pyramid - - - - -	24	6	18	4·5
Pedestal of quadriga - - - - -	—		6	1·5
	126	0	126	0

The result is, that the total height of the architectural portion of the building, without the sculptural addition made by Pythis, is seen to be exactly equal to the length (126 feet), and as 6 to 5 to the breadth (105 feet), of its base, dimensions which, if admitted to be authentic, show the extreme care with which Satyrus and Phyteus adjusted its every proportion.

But then comes the addition made to the building by Pythis, which, as Pliny tells us, raised its extreme height to 140 feet. We have therefore to assign 14 feet to the quadriga. Sir Charles Newton, with the aid of Lieut. Smith and Mr. Pullan, calculated the radius of the chariot wheel from the portions of it which they discovered; and adding sufficient height for the bottom of the car above the axletree, and for the stature of the chief figure which stood within it, and which was fortunately preserved nearly entire, they arrived at the conclusion that the complete group must have been about 13 feet 3 inches high. If, accepting this conclusion, we add 9 inches for the thickness of the slab or slabs representing the ground on which the chariot and horses stood, and which lay on the top of the pedestal, we have the 14 feet required.

It remains to describe the interior of the monument as now restored. This consists of two divisions only, the Basement and the Pteron.

1. It was ascertained by Sir Charles Newton's expedition that the lowest range of rooms, including probably the actual tomb of Mausolus, was considerably below the level of the surrounding ground, and of the architectural base of the building. Beyond the west end the explorers discovered and excavated a staircase cut in the rock, descending to a point about 26 feet westward of the foundations.<sup>a</sup> Opposite its foot was what had been originally, or at least once, used for an entrance to the underground chambers, but was afterwards closed by a large stone which was found *in situ*, and which had evidently been lowered into its place by machinery from above. Sir Charles Newton concluded that both the staircase and the entrance had been made for conveying the corpse of Mausolus to its final resting-place, and that the entrance had immediately after been blocked up by the inserted stone. One peculiarity in this stone was that its inner surface was polished, whilst its outer was left rough; suggesting the probability that the whole space between it and the staircase was at once filled up with earth, so as to conceal the entrance, and protect the contents of the interior. What apartment once existed immediately within the blocked opening, or what was the location or plan of any of the inner divisions of the basement, the explorers found nothing to show. We have therefore to depend exclusively on De la Tourette's narrative in restoring all that portion of the structure which he and his comrades so ruthlessly destroyed. His *belle grande salle carrée* may most naturally be assigned to the centre of the subterranean floor. The other chamber entered, but hastily quitted, by the knights, which De la Tourette likens to an

<sup>a</sup> To understand the following description of the ground plan refer to Plate XXI.



*antichambre*, and which contained a costly tomb with cloth of gold, perhaps the tomb of Mausolus himself, may be supposed to have nearly adjoined the opening so carefully blocked by the great stone. I have accordingly placed it in my plan under the western portico; a position which might have suggested to the knight his idea of an antichamber or vestibule, if, as is probable, he did not discover that the access from without was purposely blocked up. The real ingress of visitors was, I believe, at the opposite or east end of the building, where, under the portico, I have placed an entrance-hall on the ground level. From this hall I suppose a staircase to have descended to the principal underground apartment, the true *cella* of the building, whose form and decorations are so fully described by the Rhodian knight. I have made this apartment 28 feet square and 24 feet high to the top of the cornice. For a quadrangular room, entirely open in its area within, these dimensions are larger than any which I know discovered in any Greek building anterior to the Roman age, and the knights might well have been astonished at finding themselves suddenly within such a room in the heart of a deserted mound. Much larger dimensions might no doubt have been assumed, could we, like Mr. Pullan, imagine a chamber of the "beehive" form used in the earlier times, where the walls were constructed in concentric horizontal circles of radiating stones with continuous and uniform pressure all round, closed at the top by a central keystone. But unfortunately the words of De la Tourette exclude the possibility of any but the square form, and in that form a very large room, without any internal support for its ceiling, could not safely have been attempted with the limited mechanical contrivances known to the Greeks. The roof of the room represented in my design is in the form of a hollow pyramid, constructed on each of its four sides with horizontal courses of stone blocks overlapping each other as they ascend to a small square central opening, which was covered by a single flat stone.<sup>a</sup> On the inner or chamber side the blocks in each course are worked off at the bottom, so as to fall into a continuous slope of ascent, and at the same time to remove unnecessary weight, whilst on the outer or wall side a heavy mass of stone or rubble overlies each block, and prevents it from rising behind. This is the same construction, vertically, as in the circular or "beehive" chambers, but horizontally it is less solid, from the inevitable breaks at the four corners of the room. It was at any rate found by the Greeks a safe method of roofing square apartments of moderate size, as appears from the three perfect examples to be presently cited, and perhaps others unknown to me. The

<sup>a</sup> Cf. sections of this room in Pls. XXIII. and XXIV.



majority, however, of sepulchral chambers now remaining are oblong in plan, and these were usually covered on a different system, one which was common to the Greeks with the Egyptians and Etruscans, and, I may add, with the Mexicans in Yucatan. In such chambers the two longer sides only were roofed with overlapping stones, whilst the two shorter ones rise perpendicularly from the ground to the summit.<sup>a</sup>

The most perfect illustrations I know of the system employed for square chambers, which is followed in the present restoration, are to be found in two tombs of supposed Kings of the Bosphorus, near Panticapæum. The first, which is in a tumulus now called Koul-Oba, was discovered in 1832, and contained skeletons with rich gold ornaments and various accoutrements, apparently dating from the fourth century B.C.<sup>b</sup> The structure of this tomb remains unbroken, and the roof is exactly of the form here adopted and just now described. The stone which covers the central opening appears, from the plate in the Russian publication, to have been adjusted to the highest course of blocks underneath it by a joggle-joint, making it strictly a keystone. The other Panticapæan tomb, which bears the name of Melek-Tchesmenskoi-Kourgan, was discovered some years later, and its contents had been already pillaged. Its form and construction are the same as those of the Koul-Oba.<sup>c</sup> A third tomb, with a similar pyramidal roof, was opened about thirty years since by Mr. Biliotti at Cazviri, near Camirus, and is described by him in an unpublished Report now in the British Museum, a copy of which has, by the kindness of Mr. A. S. Murray, been communicated to me. Two tombs were found at this place, the larger of which was evidently, from Mr. Biliotti's description and drawing, oblong in plan, though whether it was roofed in the manner here described as peculiar to chambers of that form, or upon some other system, will be more fully considered presently. But the smaller tomb, which is shown by its floor measurements to have been square, and into which the discoverers descended by removing the keystone in the centre of its roof, was evidently crowned with a hollow pyramid, just like the sepulchres at Panticapæum. It is true that all these examples of square chambers are small as compared with what I have designed for the Mausoleum. But given good

<sup>a</sup> A well-known example of this system exists in the principal chamber of the "Regulini Galassi Tomb," near Cervetri, the ancient Cære. It is represented in Fergusson's *Handbook of Architecture*, i. 202, fig. 234.

<sup>b</sup> See *Antiquités du Bosphore Cimmerien*, St. Petersburg, 1854, Plan A.

<sup>c</sup> See *Compte-rendu de la Commission Impériale Archéologique pour l'an 1859*, St. Petersburg, 1860.

materials and skilful workmanship, neither of which could have been wanting at Halicarnassus, there is no reason why a construction which is sound on a small scale should not be extended, within reasonable limits, to a larger one, retaining exactly the same design. To diminish any risk from the overhanging courses in my scheme, I have made the projection of each course somewhat less in proportion to its height, and consequently the slope of the whole series somewhat steeper, than in either of the examples at Panticapæum. Above the central keystone, which is an exact imitation of that at Koul-Oba, I have made a small triangular opening to relieve the weight, on the same principle as those over the Lion Gate at Mycenæ and the door of the so-called Treasury of Atreus, but here extended to each of the four sides, so as to form a pyramid instead of a single triangle. Whatever the construction of the roof over the Mausoleum chamber may have been, it must have been strong enough to resist the impact of such parts of the superstructure as fell upon it at the overthrow of the building; for, had the roof given way, the knights would have found, instead of a beautiful and apparently perfect apartment, a room choked up with fallen blocks and masses of rubble.

The lower or upright walls of the chamber are here delineated, as far as possible, after De la Tourette's description,<sup>a</sup> the general purpose of which I have endeavoured to explain in the earlier part of this investigation. The room having been, as he tells us, *embellie tout au tour de colonnes de marbre, avec leur bases, chapiteaux, architraves, frises, et cornices, gravées et taillées en demy bossé*, I have here represented semi-columns engaged in the wall, six on each side (including those at the angles, which are common to two sides), so as to make twenty in all. I have designed them of the Corinthian order, which the Greeks commonly preferred for interiors, even though for the exteriors of the same buildings they used Doric or Ionic. Thus the great Temple of Apollo Didymæus at Branchidæ, built by Pæonius and Daphnis, though Ionic externally, had Corinthian semi-columns (such as here proposed) engaged in the wall of the pronaos.<sup>b</sup> The Temple of Athene Alea at Tegea, which was built by Scopas, the most celebrated of the Mausoleum artists, was surrounded externally by Ionic columns, whilst the interior had two tiers, the lower Doric, the upper Corinthian.<sup>c</sup> The great temple at Cyrene, which seems from the description of its workmanship to have been about

<sup>a</sup> Cf. sections in Pls. XXIII. and XXIV.

<sup>b</sup> Dilettanti Society, *Ionian Antiquities*, vol. i. c. iii. p. 52, Pls. ix. and x.

<sup>c</sup> Pausanias, viii. 45, s. 5.

contemporary with the Mausoleum, had a Doric peristyle externally, and within the *cella* a row of Corinthian columns on each side;<sup>a</sup> and the Temple of Apollo Epicurius at Bassæ, which dates from the preceding century, combined a Doric peristyle on the exterior with two rows of Ionic columns within on the sides of the *cella*, and an insulated Corinthian column at its south end.<sup>b</sup>

The intercolumnar wall-spaces, the *entredeux* of De la Tourette, I have divided vertically into three rectangular compartments, with a stylobate or dado underneath, each compartment bordered with veneers (*lastres*)<sup>c</sup> of coloured marbles, with fillets (*listeaux*) and moulded edges (*moulures*). Within these borders in the middle row are sunk panels of white marble, sculptured with scenes of combat in half-relief, which De la Tourette describes as carved in the wall itself (*le fonds blanc de la muraille, où ne se voyait qu'histoires taillées, et toutes batailles à demy relief*).

Afterwards, the knight tells us, they found, *outré ceste sale*, beyond or leading out of the principal room, a very low door, through which they passed to the sepulchral chamber already referred to.<sup>d</sup> It is not clear from the word *outré* whether this door opened directly out of the principal room, or was unconnected with it and reached by some other access, but as there is no mention of any other access, I incline to think it must have opened directly out of the room, and was only overlooked at first from the insufficiency of light. For though the knights, on first descending into the room, *prireut de la chandelle*, they are not likely to have carried such a stock of candles with them as to illuminate at once the whole apartment.<sup>e</sup> Accordingly, I have represented the "very low" door as being made in the dado, only 5 feet high, and without architrave or other feature to attract immediate notice. I have also placed it, agreeably to common usage in the disposition of Greek tombs, not in the middle of the wall, but on one side.<sup>f</sup> In the

<sup>a</sup> Smith and Porcher, *History of the recent Discoveries at Cyrene*, p. 71, Pl. LV.

<sup>b</sup> Cockerell, *Ægina and Bassæ*, Pls. XI. and XV.

<sup>c</sup> *Lastra* is thus defined in Ducange, *Glossarium, etc.*: *Vox Italica, tabula lapidea, vel bractea tenuis, quo modo secari solent marmora ad pavimentum vel ad parietes inducenda.*

<sup>d</sup> Cf. Pl. XXIV.

<sup>e</sup> In the design here proposed I have introduced another door on the opposite side of the room, opening to the staircase which descended from the entrance hall (see ground-plan, Pl. XXI.). Whether this also was overlooked by the knights, or whether it was only not mentioned by De la Tourette because nothing of interest was found in or beyond it, it is impossible to say.

<sup>f</sup> At Mylassa this one-sided arrangement was adopted even in the exterior of the building. It occurs likewise in a sepulchre in Rhodes, published by Ross. See Gerhard, *Archæologische Zeitung*, 1850, Taf. xix.

chamber to which this door led, through an intervening passage, as I suppose, were found the sepulchral remains, the gold and costly treasures, which were carried off the night after their discovery, as it was believed, by corsairs. But of the funeral chamber itself De la Tourette gives us no particulars; nor indeed of any other apartment discovered within the basement. Many rooms may have been included within so large a monument, with cells and niches for burial of the family and dependents of the dynasty. But I do not attempt the restoration of anything beyond either what is actually described by De la Tourette, or what seems necessary to explain the location and accessibility of what is so described. To the latter class belong, I think, the hall of entrance,<sup>a</sup> and the staircases leading to the *cella* and tomb below, and to the Pteron above.<sup>b</sup> As the hall would not require that quasi-religious darkness which the ancients thought appropriate for the deceased's actual remains, I have provided for admitting into it the light of day from a source not exposed to what was most dreaded in those times, the danger of sacrilege. For this purpose I have made in the floor of the eastern portico three openings, covered with bronze gratings, to serve as skylights below, and in like manner I have elsewhere placed small grated openings in the pavement, at convenient points, for lighting the staircases which ascend from the entrance-hall to the Pteron.<sup>c</sup> It is not improbable that the hall itself would have been adorned with mural paintings or sculpture, and perhaps furnished with inscriptions, but to attempt even the suggestion of any details of this kind would be embarking on a sea of conjecture quite beyond the present inquiry.

2. The interior of the Pteron cannot in the present restoration be strictly distinguished from the exterior, which has already been described, for the one passes on every side into the other. At the centre of the open space, *περισκέπτῳ ἐνὶ χώρῳ*, stood, as I assume, the colossal *eikon* of Mausolus, which supplied the motive, not merely in personal sentiment, but in architectural composition, for the whole structure. I cannot indeed cite as evidence any actual relics of this figure, which I regard as what I may call the *ὀμφαλός* of the Halicarnassian monument. But the reason is not far to seek. Such a figure would, by ancient custom, have

<sup>a</sup> Cf. the entrance hall in the Rhodian sepulchre referred to in the preceding note.

<sup>b</sup> The two narrow staircases suggested in Pl. XXI. ascend to a converging point shown in the plan, and thence emerge in the broader flight of steps leading to the western portico, as shown in Pl. XXII.

<sup>c</sup> A bronze grating inserted in a pavement slab, and intended for drainage, was found by Sir C. Newton among the foundations of the building. *Travels and Discoveries in the Levant*, ii. 207 (woodcut).

been made of bronze, relieved probably in parts with still more precious materials. It would therefore, as a matter of course, have been melted down by the spoilers of the middle ages, who have left no record of their devastations. The figure sketched in my design, which is introduced solely to illustrate my architectural theory, is purely conjectural in form. It is supposed to be raised on a dais or platform of two steps. Any questions as to the details of its treatment will be more appropriately considered under the final head of the present inquiry, which deals with the sculpture with which the Mausoleum was adorned.

The roof of the interior or central part of the Pteron differs in my design from that of the *cella* in the basement, both in its method of support, and in its own form.

1. The difference of support lies in the bases from which the two roofs rise. Whilst that of the *cella* rests altogether on four unbroken walls, that of the Pteron rests, not immediately, but ultimately, on a group of piers with openings between them. But these piers I suppose to have been all united above by semicircular arches, with radiating voussoirs, which support a level flooring continued without break all round the exterior of the central space, and from this flooring rise the converging sides of the roof, in the same manner as those below. I do not, of course, forget that no radiating arch of semicircular or any other form is found on the exterior of any Greek building of the autonomous age; nor even in their interiors did it ever enter ostensibly into the architectural design. But this was not, in my opinion, due to ignorance or incompetency on the part of the builders. A structural contrivance which was in use in Assyria, in Egypt, and in Rome, long before the period we are now dealing with, could not have been unknown to the Greeks.<sup>a</sup> The reason why it was not made a conspicuous feature in their architecture is to be found in their severe canons of taste. As all the lines of support in their buildings were vertical, and all those of connection horizontal, and consequently all the intermediate openings or voids were rectangular, their architects felt that the introduction of a curved opening and a slanting support would be inharmonious with their predominant principle of construction. That the mechanical value of the radiating arch for distributing superincumbent weight was, to a certain extent, understood by them, is shown by various existing remains, some of an early date, though all indeed on a small

<sup>a</sup> It is not here intended to assert that the full capacities of the radiating arch, whereby at a later period the whole system of architecture was gradually transformed, and its resources proportionately extended, were known to any nation prior to the Romans.



scale, and, for the reason just stated, confined to positions which were either altogether unseen or unconnected with ornamental design. Thus:

A. At Æniadæ, in Acarnania, gateways are found surmounted by true radiating arches, inserted in the city walls, which are of polygonal masonry.<sup>a</sup>

B. In the theatre at Sicyon are two tunnels passing under the semicircular range of seats, and vaulted with true voussoirs. Through one of these it has been supposed that the tyrant Nicocles escaped from the pursuit of Aratus.<sup>b</sup>

C. The next example I cite with some hesitation, as there is a certain discrepancy, at least apparently, in the descriptions of it. It is a small but interesting Greek tomb at Pyli, in the island of Cos, which is known from an ancient inscription to have been the *herōon* of one Charmylos and his family, and which has a semicircular vault over its central area. Ross has published an illustration of it in section, from which the vault seems to be regularly arched with radiating voussoirs;<sup>c</sup> but Sir Charles Newton, who visited the tomb in 1853, calls it a "horizontal vault."<sup>d</sup> The exact date of its construction is not stated, but it is said to have a front court "decorated in the best Ionic style."

D. An ancient aqueduct, descending from the fountain of Burinna to the town of Cos, appears, from Sir C. Newton's account, to present an example of true vaulting. The water rises from a spring covered by a *tholos* or circular chamber, "probably of high antiquity," and is thence carried through a gallery which is differently roofed in different parts. One part is covered with "an Egyptian vault of advancing stones;" but another part "is built for 48 feet of small blocks, and with a regular arch," that is, of course, with radiating voussoirs.<sup>e</sup>

The arches which I suggest for connecting the eight great supporting piers would be barely visible from below, as the only light that could reach them would be that reflected from the pavement of the Pteron, a long way underneath.<sup>f</sup>

<sup>a</sup> Leake, *Northern Greece*, iii. 556 seq. Cf. *Peloponnesiaca*, 121. Mure, *Journal of Tour in Greece*, i. 106, seq.

<sup>b</sup> Blouet, *Expédition en Morée*, vol. iii. Pl. 82, figs. 1, 2, and 4. Plutarch calls these tunnels *ὑπὸ νόμοις*. *Vit. Arati*, c. ix.

<sup>c</sup> Gerhard's *Archæologische Zeitung*, 1850, xxii. 3, 5; here cited from Guhl and Koner's *Life of the Greeks and Romans*, English ed., p. 92, fig. 116, where Ross's illustration is reproduced.

<sup>d</sup> *Travels and Discoveries in the Levant*, i. 242.

<sup>e</sup> *Ibid.* 229, 230.

<sup>f</sup> Since the preceding paragraph was read at the meeting of the Society, I have been assured on good architectural authority that the arches here proposed are really unnecessary, as the openings between the piers are so narrow that the horizontal connecting stones would of themselves safely carry the weight imposed upon them. I retain the arches in my design, however, *ex abundante cautela*.



2. The form of the proposed roof differs from that of the *cella* below perhaps even more essentially than its method of support. Whether any precedent can be cited from Greek architecture for the peculiar arrangement adopted depends on the interpretation given to Mr. Biliotti's description of the larger tomb at Cazviri. His words are these, "The two sepulchral monuments at Cazviri are both chambers built in a square hole cut in the rock with pyramidal ceilings . . . they are formed of stone slabs superposed one over the other, and projecting from each opposite side towards the centre of the room." Thus far his language certainly implies that the two chambers were similar in form, square in plan, and each roofed with a strictly shaped hollow pyramid. He then gives further particulars of the smaller chamber, which prove these conditions to have been actually observed there. But immediately after he says: "The second sepulchre consists merely of a chamber 22 feet 7 inches by 10 feet 9 inches;" that is, is oblong in plan, the length rather more than twice the breadth; and, in proof of the accuracy of these figures, he gives a ground-plan, showing exactly the proportions stated. The walls of the chambers, he says, are 7 feet 8 inches high, and the sloping roof above them seems, from the scale given with his sectional drawing, to be about 9 or 10 feet more. He then continues, "the stones with which the pyramidal ceiling is built rest on the wall; they are generally  $6\frac{3}{4}$  inches thick, and project  $2\frac{3}{4}$  inches one over the other in the interior of the room. There was an aperture of 2 feet at the top." These proportions in the overlapping stones produce a roof of steep slope, which safely covers a space of 10 feet 9 inches, the lateral dimension given above. But if applied to the longitudinal dimension of 22 feet 7 inches without modification, so as to retain the same slope, they leave a vacancy of about 14 feet between the two end slopes at the top. It would be impossible to diminish this space to any considerable extent by increasing the inclination of the slope, as this would involve insecurity in the whole construction. Therefore, if we are to assume that Mr. Biliotti used the word "pyramidal" in any definite sense as applied to this chamber, that is, if he really meant that the roof was formed of four converging slopes, and not merely of two converging and two upright sides, we must conclude that the ceiling was constructed in a method compounded of the two systems already described, the ends being roofed with slopes proper to a hollow pyramid, though widely separated from each other at the top, whilst the intervening part of the chamber was roofed with the two lateral slopes commonly used at the sides of oblong chambers, which here approached at the top within 2 feet of each other. This is the conclusion to which Mr. Biliotti's language would certainly lead me; but I am bound

to state that his drawing gives no indication of any slopes whatever at the ends of the chamber, though their presence seems to me indispensable to any correct description of the ceiling as "pyramidal." Whether or not the compound system here suggested was really that employed at Cazviri, it seems to me perfectly safe in itself; and as it accords well with the oblong form of the pyramid over the Pteron, I have adopted it in my restoration of the Mausoleum. I have assumed an interval of 3 feet between the two lateral slopes at the top; but, instead of the single keystone, which in a strictly pyramidal roof closes the opening, and unites the four sides, I have laid a series of stone crossbeams on the top of the two lateral slopes, with joggle-joints like the keystone at Koul-Oba. The accompanying plan of the ceiling, as supposed to be seen from below (Fig. 13), will best explain its construction.

This completes the description of the interior of the monument, as restored in the present scheme. Above the roof of the Pteron is the space originally filled by the apex of the upper pyramid, and supposed to have been enclosed by Pythis within the pedestal constructed for his quadriga. This supplementary feature has been sufficiently described in the account given of the exterior of the building. In the present design the two statues standing in the quadriga are represented as they are now placed in the British Museum. Any comment on their relative position must be reserved for the paper in which I hope to deal with the only remaining question, viz. What was the most probable arrangement of the sculptures in the original monument?

In bringing to a close this architectural inquiry, which, considering the nature and complexity of the subject, has not, I hope, been thought unreasonably prolonged, I may be permitted to add a few words to distinguish more clearly than before the different degrees of weight which I attach to different parts of my scheme. I adhere decidedly to all those portions of the restoration which are founded on what I hold to be the literal, grammatical, and most logical rendering of the *ipsissima verba* of ancient writers. I adhere less decidedly, but still with much confidence, to those features of the design which are suggested by such analogous Greek or Roman monuments as may be legitimately regarded either as

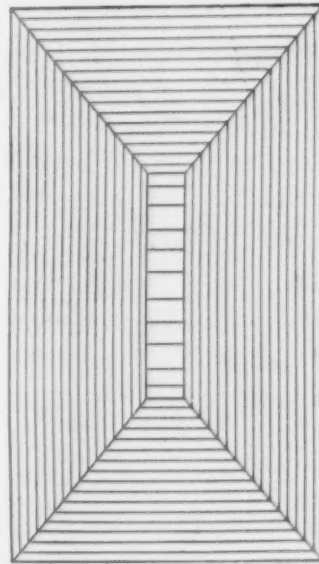


Fig. 13. Plan of the Upper Roof, as seen from the interior of the Pteron.

imitations of the Mausoleum, or as sensibly influenced by it. But I do not insist on any portions of the scheme which go beyond the conclusions manifestly deducible from one or other of these two classes of evidence. All such unauthenticated parts must be taken merely as suggestions designed to show how the fragmentary remains now in the Museum *may*, I do not say *must*, be comprised as members in an architectural whole consistent alike with the literary and the monumental evidence just referred to, evidence the results of which are summarily stated in the five cardinal propositions put forth in the preceding paper. I am not myself an architect; nor have I had the benefit of any professional advice in preparing my design. Any technical errors which may in consequence be found in it will, I hope, be freely pointed out with a view to correction. I cannot but fear that I have been somewhat presumptuous in attempting unaided the solution of so difficult and complex a problem. But I have been encouraged by the hope that, even if my restoration does not meet with approval, it may still serve to stimulate some superior hand to work out a more acceptable scheme, founded on just principles of criticism. To anyone who will make the experiment I may, I think, fairly say,

“si quid novisti rectius istis,  
Candidus imperti: si non, his utere mecum.”

## TABLE OF MEASUREMENTS.

## A. VERTICAL DIMENSIONS OF THE ENTIRE MONUMENT.

						feet.	inches.	feet.	inches.	feet.	inches.
1. Lower Pyramid :											
Plinth	-	-	-	-	-			6	6		
Twelve steps, each 1 foot 6 inches high	-	-						18	0		
										24	6
2. Podium :											
Plinth	-	-	-	-	-	2	0				
Die	-	-	-	-	-	21	0				
Cornice	-	-	-	-	-	2	3				
								25	3		
Graduated Stylobate of Pteron :											
Lower step (as seen)	-	-	-	-	-	1	9				
Upper step	-	-	-	-	-	1	0				
								2	9		
										28	0
3. Pteron :											
Column ( $8\frac{3}{4}$ diameters)	-	-	-	-	-			28	9		
Entablature	-	-	-	-	-			8	9		
(25 cubits of Pliny)	-	-								37	6
4. Attic	-	-	-	-	-					11	6
5. Upper Pyramid :											
(Originally.)								(As altered.)			
Twenty-four steps	-	feet.	inches.					Eighteen steps	-	feet.	inches.
		24	6							18	4.5
								Pedestal of quadriga		6	1.5
										24	6
(Total of architectural portion)	-	-	-	-	-					126	0
6. Quadriga, including its plinth	-	-	-	-	-					14	0
Total height named by Pliny	-	-	-	-	-					140	0

## B. HORIZONTAL DIMENSIONS OF THE PTERON.

## I. Length from East to West.

(A.) Octostyle lateral Colonnade :	feet. inches.	feet. inches.	feet. inches.
From centre to centre of outside columns :			
Seven columniations of 8 feet 9 inches <i>plus</i> 1 foot			
9 inches in the centre - - - =	63	0	
Half diameters of two outside columns, two (1 foot			
9 inches) - - - - - =	3	6	
(Length of colonnade to outside edges of shafts) ———	66	6	
(B.) Two columniations from colonnade to corners of			
Pteron, two (8 feet 9 inches) - - - =	17	6	
(C.) Four columniations at sides of front porticoes, four			
(8 feet 9 inches) - - - - - =	35	0	
(D.) Projections of two bases of columns to edges of			
upper steps, two (3½ inches) - - - =	0	7	
(E.) Projections of two lower steps, two (4 inches) - =	0	8	
(Total length on lower step to exterior of porticoes)	120	3	

## II. Breadth from North to South.

(A.) Hexastyle Portico :			
From centre to centre of outside columns :			
Five columniations of 8 feet 9 inches <i>plus</i> 1 foot			
9 inches in the centre - - - =	45	6	
Half diameters of two outside columns, two (1 foot			
9 inches) - - - - - =	3	6	
(Breadth of portico to outside edges of shafts) - ———	49	0	
(B.) Two columniations from portico to corners of			
Pteron, two (8 feet 9 inches) - - - =	17	6	
(C.) Two columniations at sides of lateral colonnades,			
two (8 feet 9 inches) - - - - - =	17	6	
(D.) Projections of two bases of columns to edges of			
upper steps, two (3½ inches) - - - =	0	7	
(E.) Projections of two lower steps, two (4 inches) - =	0	8	
(Total breadth on lower step to exterior of colonnades)	85	3	
Sum of length and breadth on lower step of Pteron - - -	205	6	
		2	
<i>Totus circuitus</i> on do. (two lengths <i>plus</i> two breadths) - - -	411	0	

## TABLE OF PROPORTIONS.

## I. "RECTILINEAR" PROPORTIONS.

								feet.	inches.
The heights of the four principal divisions of the building are :									
A. Lower Pyramid	-	-	-	-	-	-	-	24	6
B. Podium and Stylobate of Pteron	-	-	-	-	-	-	-	28	0
C. Pteron and Attic	-	-	-	-	-	-	-	49	0
D. Upper Pyramid	-	-	-	-	-	-	-	24	6
								126	0

These heights bear the following ratios to each other :

A : B :: $24\frac{1}{2}$ : 28	-	-	-	-	-	-	-	=	7 : 8
B : C :: 28 : 49	-	-	-	-	-	-	-	=	4 : 7
C : D :: 49 : $24\frac{1}{2}$	-	-	-	-	-	-	-	=	2 : 1

## II. "RECTANGULAR" PROPORTIONS.

1. Pteron (exterior) :											feet.	inches.		
The height of the pediment over the portico to the top of its cymatium is														
8 feet, which, added to the height of the order (37 feet 6 inches), makes														
the whole portico											-	-	45	6
The height of the columns (28 feet 9 inches) <i>plus</i> their stylobates (2 feet 9 inches) is														
The breadth of the portico, from centre to centre of outside columns, is											-	45	6	
The length of the side colonnade, similarly measured, is											-	-	63	0
Therefore the heights bear the following ratios to the breadth and length :														

Therefore the heights bear the following ratios to the breadth and length :

	Height		Breadth or length.			
	feet.	inches.	feet.	inches.		
Height of portico (with pediment) to its breadth	45	6	:	45	6	= 1 : 1
Height of column <i>plus</i> stylobate to breadth of portico	31	6	:	45	6	= 9 : 13
Height of column <i>plus</i> stylobate to length of side colonnade	31	6	:	63	0	= 1 : 2



## 2. Podium :

								feet.	inches.
The height of the die, between plinth and cornice, is	-	-	-	-	-	-	-	21	0
Its breadth, under the portico (being the same as the outside edge of the columns above), is	-	-	-	-	-	-	-	49	0
Its length, under the side colonnade (being ditto.) is	-	-	-	-	-	-	-	66	6

Therefore the height bears the following ratios to the breadth and length :

				Height.			Breadth or length.		
				feet.	inches.		feet.	inches.	
(Under the portico)	-	-	-	21	0	:	49	0	= 3 : 7
(Under the side colonnade)	-	-	-	21	0	:	66	6	= 6 : 19

## 3. Sub-podium under Portico :

								feet.	inches.
The height of the die, between plinth and frieze, is	-	-	-	-	-	-	-	17	0
The breadth is	-	-	-	-	-	-	-	51	0
Therefore the height is to the breadth in the ratio of	-	-	-	-	-	-	-	17 : 51	= 1 : 3.

\* \* It has already been pointed out that the total height of the building (126 feet) was to its length as 1 : 1, and to its breadth as 6 : 5.

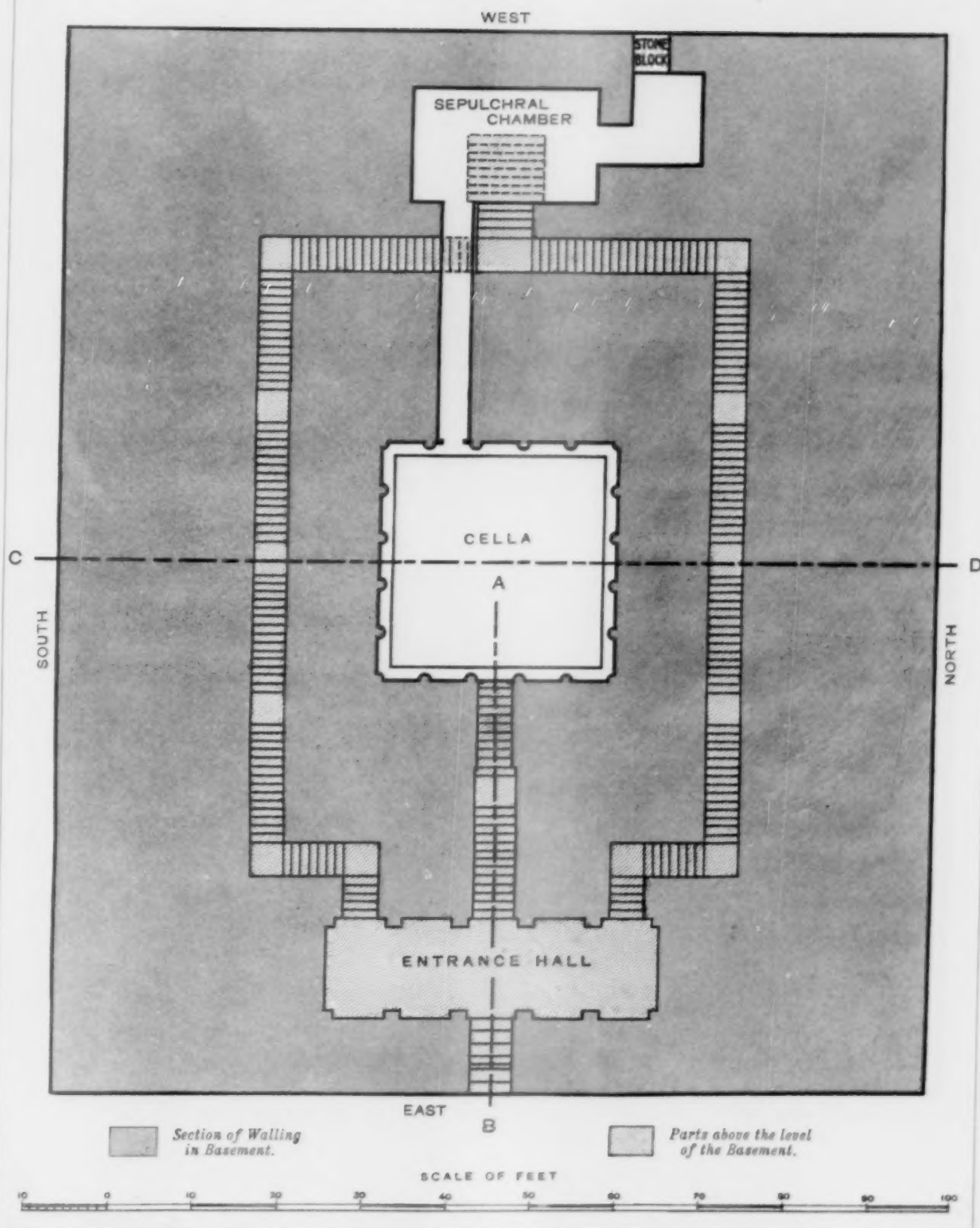
## 4. Interior of Pteron :

								feet.	inches.
The open space from east to west, measured between two opposite engaged pilasters, is	-	-	-	-	-	-	-	42	0
The open space from north to south, similarly measured, is	-	-	-	-	-	-	-	24	6
Therefore the length is to the breadth in the ratio of	-	-	-	-	-	-	-	42 : 24½	= 12 : 7.

## 5. Interior of Basement :

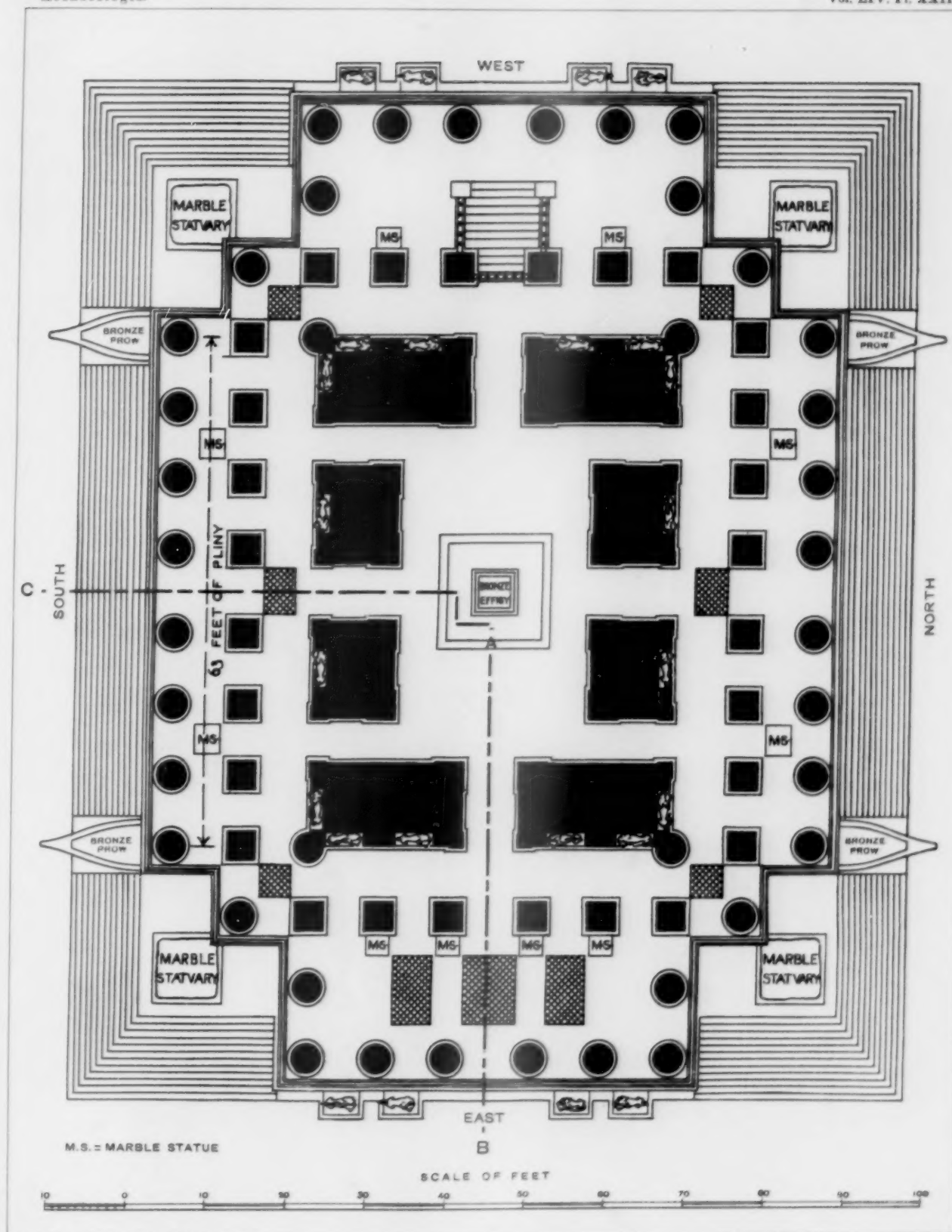
								feet.	inches.
The length of each side of the <i>cella</i> is	-	-	-	-	-	-	-	28	0
The height, to the top of the cornice, is	-	-	-	-	-	-	-	24	0
Therefore each side is to the height in the ratio of	-	-	-	-	-	-	-	28 : 24	= 7 : 6.

\* \* This table comprises all those dimensions of the building which are most easily compared by the eye, and in which, therefore, the observance of obvious or low proportions is most essential to symmetry. It will be seen that none of the ratios obtained involve any higher figure than 19.



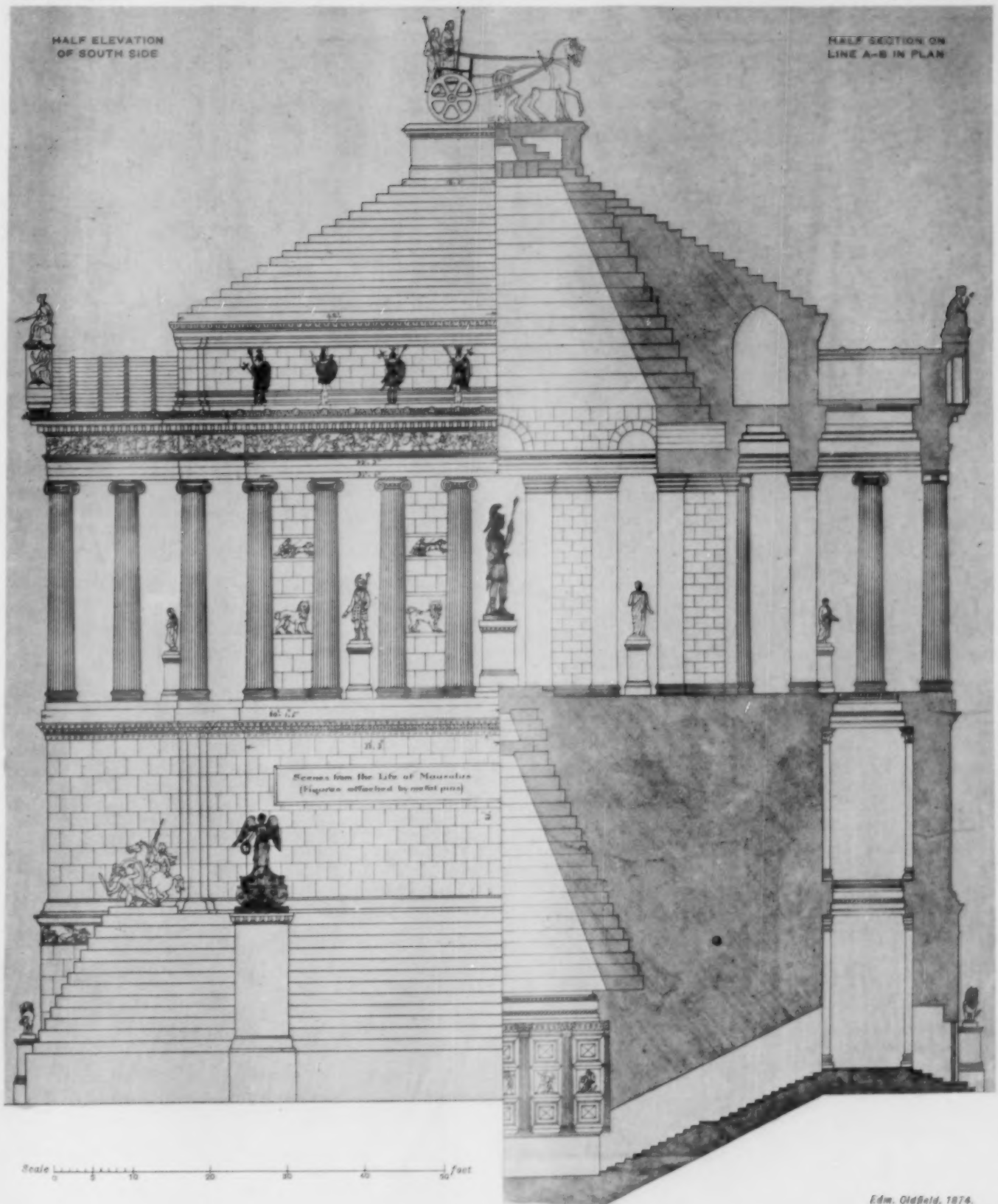
THE MAUSOLEUM AT HALICARNASSUS.—SUGGESTED PLAN OF BASEMENT.





THE MAUSOLEUM AT HALICARNASSUS.—SUGGESTED PLAN OF PTERON.



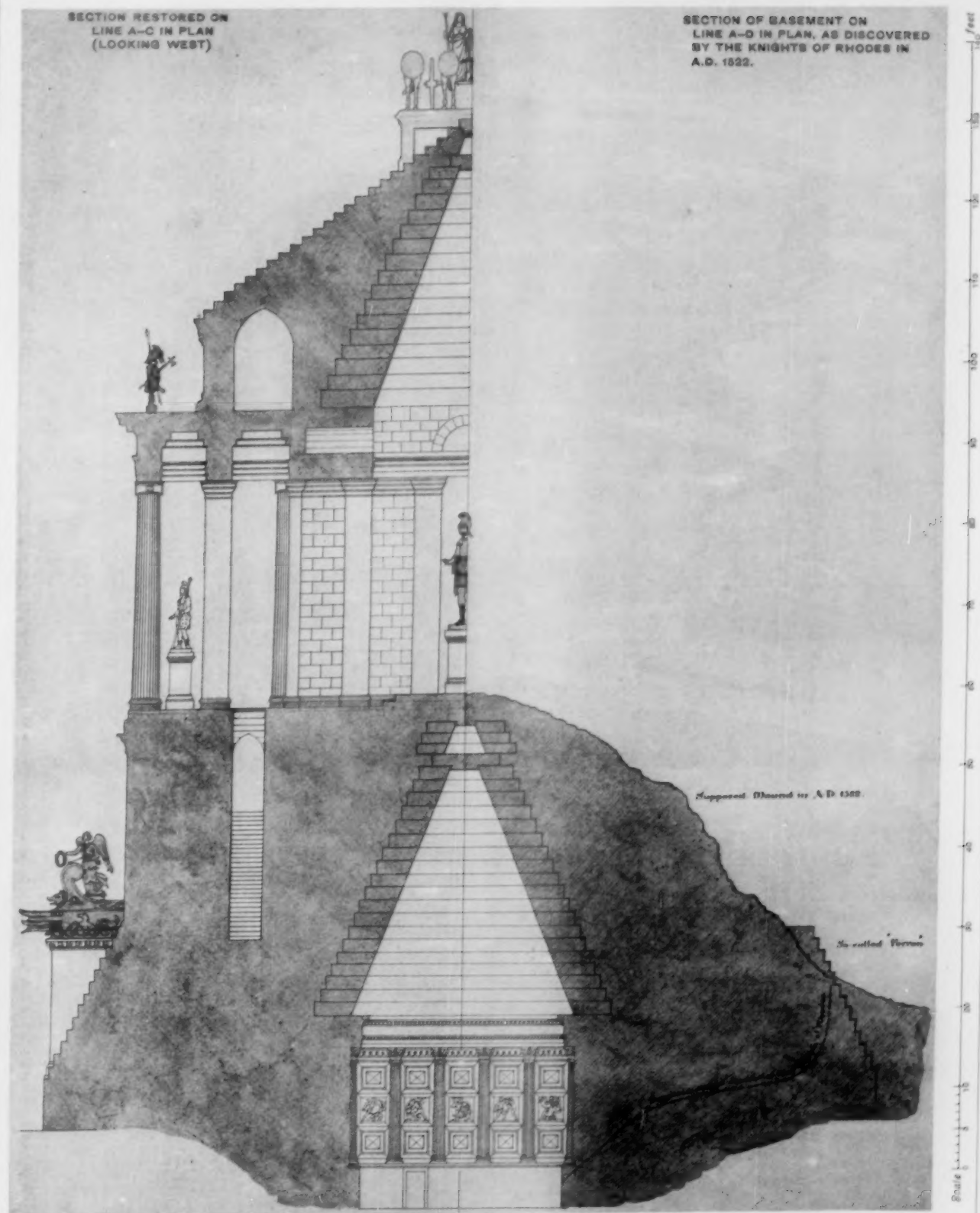


Edm. Oldfield, 1874.

THE MAUSOLEUM AT HALICARNASSUS.—SOUTH ELEVATION RESTORED.

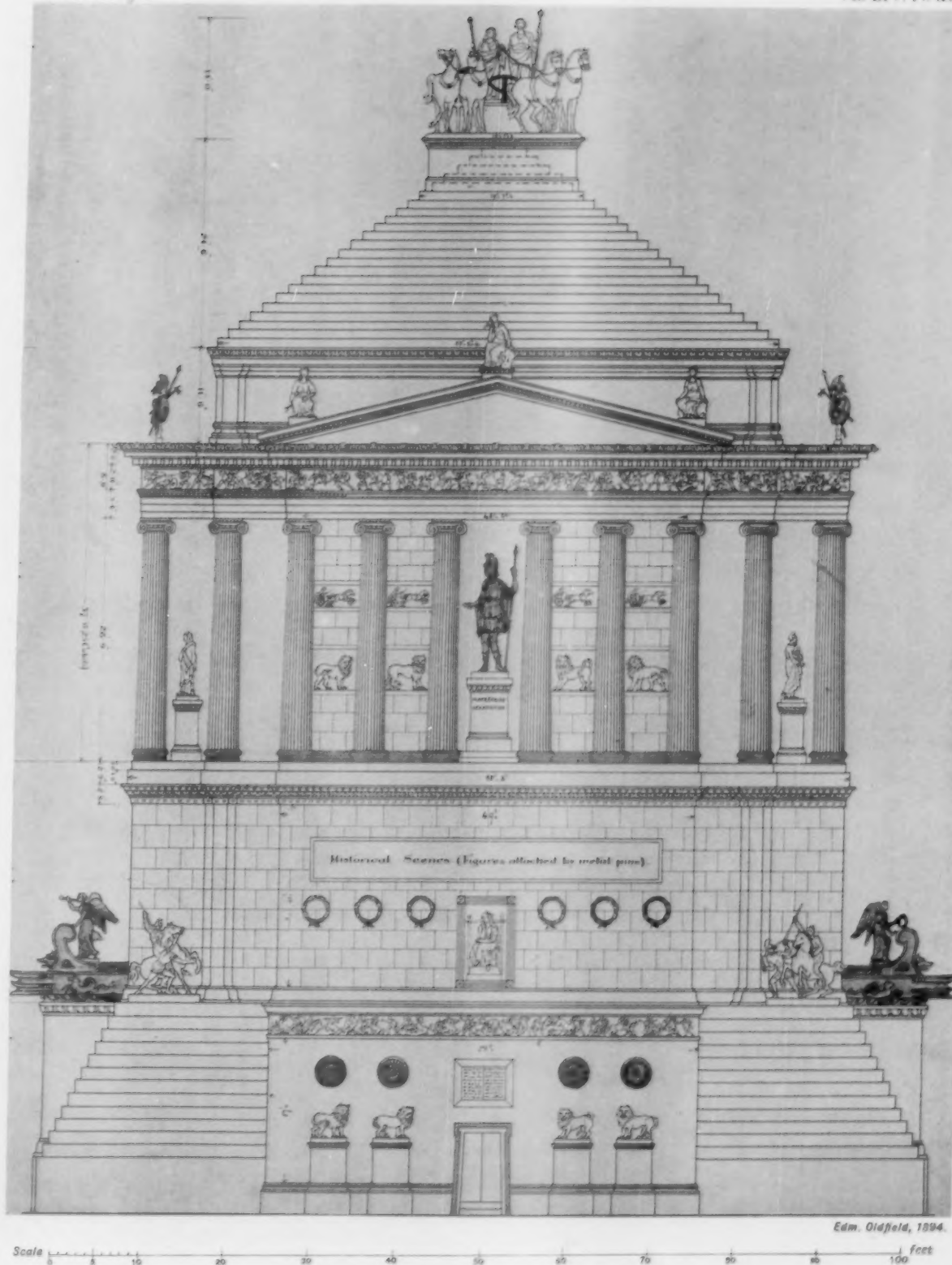






THE MAUSOLEUM AT HALICARNASSUS.—SECTION RESTORED.





THE MAUSOLEUM AT HALICARNASSUS.—EAST FRONT RESTORED.



XVII.—*Notes upon two Egyptian Portrait Mummy Coverings or Shrouds, belonging to the First Century A.D.* By F. G. HILTON PRICE, Esq., F.S.A.

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Read June 8, 1893.

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THE finest collection of ancient portraits from Egypt that has found its way to England is undoubtedly that brought over by Professor Flinders Petrie in 1889, and exhibited by him in that year at the Egyptian Hall, Piccadilly. It had been found during the previous winter months in the cemetery of Hawara, in the Fayyûm. This fine series of portraits, for such they evidently were, had been painted in wax upon wooden panels, and, according to the opinion of Professor Petrie, had been done after death. They are mostly to be seen in the British Museum and National Gallery, but some are in private hands.

Mr. Petrie informs us that these portraits were found placed over the faces of the mummies, that they belong to the second century A.D., and that the practice of painting these panel portraits was in vogue from about the year 140 to 250 A.D.

It is further stated by Professor Petrie that these portrait mummies were not immediately placed in the tombs when returned from the embalmers, but he infers that they were kept by the families in their houses or private mausoleums, probably for several generations. In support of this he quotes Herodotus,<sup>a</sup> who states that the Egyptians took the mummy away from the house of the embalmers after the period of seventy days had elapsed, which was the usual time devoted to the preparation of a mummy; it was then placed in a wooden case in the shape of a man and stored in a sepulchral chamber, setting it upright against the wall.

From this we must gather that the tombs were the receptacles for the mummies, for in the days of Herodotus the Egyptians followed their old customs, they being most conservative in their habits, and strenuously avoiding anything that was new or foreign. The custom of keeping mummies in their private houses unburied probably had not come into fashion in his day. Diodorus refers to the custom, and I think we may suppose that the practice did not come into vogue earlier than during the late Ptolemaic period, and that it was adopted by the Romans.

The Emperor Hadrian visited Egypt about the year 130 A.D. and is stated to have encouraged the Greek style of portraiture.

<sup>a</sup> Book ii. 86.



Now it may be surmised that in the middle of the third century A.D. a great change had come over the manners and customs of the Egyptians, who had by this time become more or less habituated to the ways of their Roman conquerors, so that the old practice of keeping the family mummies at home appears to have become distasteful to them and was abandoned when they adopted the new-fashioned mode of burial. In consequence of this change the collections of family mummies which had been kept unburied for several generations were now regarded as being very much out of place, so were accordingly consigned to the tombs.

They do not appear to have received honourable burial, for in some of the old tomb wells that Mr. Petrie opened in the Hawara cemetery he found large quantities of these family collections of mummies, some with gilded cartonage faces, and some with the portraits affixed to them, all indiscriminately thrown pell-mell in the utmost confusion, without any care having been bestowed upon them. Some were head first and some feet first in these old tomb wells or other tombs, and so eager did the relatives appear to get them out of sight that when any of them were found to be too large for the receptacles, they broke off either the head or feet in order to squeeze them in.

Having made the foregoing remarks upon the panel portraits by way of introduction, I will now proceed to refer to the two specimens before us, which are from my own collection.

The larger one, that of the woman (Plate XXVI.), was found at Ahmîm, the Panopolis of the Greeks, a place which had been known as Chemmis in the times of the ancient Egyptians. It was brought to England by the late Reverend Greville J. Chester, who had bought it of an Arab at Ahmîm, but he could not obtain any trustworthy account of how and under what conditions it was found. It is a mummy covering or shroud of fine flax linen, painted in *tempera*. I believe I am correct in assuming that such portraits on linen or canvas are of earlier date than those done on panels in wax, and that this example may fairly be considered to have belonged to a Græco-Egyptian mummy of the first century A.D. It measures 3 feet 10 inches by 2 feet 10 inches, and represents a female figure of considerable beauty; the rest of the painting is conventional.

The lady has dark hair and eyes, wears ear-rings, and is draped in mummy clothes of purple colour, with a deep collar of bead-work round her neck and breast. In one of her hands, which protrude from the wrappings, she holds a crook, and in the other a flail, the emblems of power and dominion that were always worn by Osiris, the great God of the dead.\* Below each shoulder is a hawk with outspread wings wearing the disk upon its head, holding by its feet to a ring.


\* A deceased person was called the Osirian, that is to say, dead in Osiris.



EGYPTIAN MUMMY PORTRAIT OF THE 1ST CENTURY, A.D.



Beneath the necklace, on the centre of the breast, is the figure of an Ibis walking, emblem of the God Tehuti or Thoth, the measurer, scribe of the gods, judge of the dead, inventor and patron of arts and sciences; he typified the moon, and was also called Hab, or the messenger.

Below the hands is the disk of the sun, whilst under it are nine triangles, arranged in threes, representing the rays of light from the solar disk. Upon each side of these is a Ut'at or mystic eye, which is composed of the eye with the appendage  in front, called the drop; it is supposed to be the eye of the cow of Hathor, and the drop is intended to represent the fluid which exudes from the eye of the cow. The two eyes are the eyes of the sun, and are sometimes personified by Shu and Tefnut, the two children of Seb and Nut. The Ut'at is sometimes called the eye of Horus, one being in the morning boat, the other in the evening boat, of the sun. The right eye also symbolized the sun, and the left eye the moon. Shu and Tefnut typified air and sun-light respectively.

In the next division is a bier, in the form of a lion, with a mummy placed upon it, on each side of which is a human-headed hawk or soul, and below it is another representation of the mummy on the bier, attended by Anubis, with Isis and Nephthys at each end pouring libations over the mummy.

Anubis, who was called Anpu in Egyptian, was the god of the dead, and as such is usually coloured black; he is jackal-headed, and wears a tunic round his loins. He typified the dusk or twilight, and was the son of Rā. At the head of the bier stands the goddess Isis, Auset in Egyptian; she was a daughter of Seb (the earth) and Nut (the sky), and was wedded to her brother Osiris before they were born. She was the mother of Horus, the sun in his strength, and typified both the dawn and the sunset; here she is represented clothed in a long garment and wearing a crown upon her head.

At the foot of the bier is Nephthys or Nebt-het, who was also a daughter of Seb and Nut, and sister of Osiris and Isis, wedded to Set, the darkness. M. Renouf, in his Hibbert Lectures, p. 112, states that there are traces of a legend according to which Osiris mistook Nephthys for Isis, his wife, as the result of which she became the mother of Anubis, the dusk; thus Nephthys typified the sunset, was sister of the sun and the dawn, was married to darkness, and was mother of the dusk. She was also styled "Eye of the Sun," regent of the gods, mistress of heaven, and of women.

On this mummy-cloth she is depicted as wearing a long garment, probably with the house and basket upon her head, from which she takes her name, *i.e.*, Nebt-het, the "lady of the house."

The cloth has three horizontal blue lines painted upon it, with white spaces between, which probably represent the linen straps which were bound round

mummies in earlier times. The first ends even with the shoulder, the second with the elbows, and the third below the vignette of Anubis and the bier. On the left hand side of the first division is Osiris or Åusar, seated on a throne before an altar; he was the eldest son of the five children of Seb and Nut, *i.e.* of the earth and sky. As we have already remarked, he wedded his sister Isis, in his mother's womb, before they were born. He is always represented wearing the Atef crown upon his head and as bandaged like a mummy, generally in a standing position, holding in his hands, which protrude from the wrappings, the flail and crook, emblems of rule and dominion. He typified the sun of yesterday, who was slain by his brother Set, the night or darkness, and who in his turn was vanquished by the young Horus or the rising sun.


On the right hand side, which is imperfect, is seen only the leg of another seated figure facing an altar.

Above the head of the portrait of the woman is a flying scarabæus, emblem of the Resurrection, and upon each side of her face is the winged serpent or uræus erect upon its tail, generally considered to be an emblem of the goddesses Isis and Nephthys, resting upon a basket. Upon the head of one is the white crown of Upper Egypt, and upon the other the red crown of Lower Egypt. At the top of this division are six blank lines arranged vertically for the insertion of names, which have been omitted.

In the second division is Rā, the principal deity of the Egyptian pantheon, the great sun god and the usual name for the sun.

In contradistinction to Osiris, who was the sun of yesterday, Rā is the sun of to-day; he was the creator of gods and of men, and the solar orb was said to be his egg, which was always taken as his emblem. He is supposed to have emanated from Nu (the sky), the father of the gods; his mother was Neith, the dawn in her type of the cow.

Mr. Renouf, in the Hibbert Lectures, p. 109, says, in the legend of the destruction of mankind, that Rā calls before him Shu, Tefnut, Seb, Nut, and the fathers and mothers who were with him when he was still in Nu.

The kings of Egypt for the most part bore the title Rā in their prenomens, but all of them were styled  Se Rā "Son of the Sun."

Rā in this picture is represented hawk-headed and wearing the disk, holding in his left hand a kukufa sceptre, and in his right the anch, or emblem of life. He is in the attitude of walking, and has a tunic and a lion's skin round his loins, and a collar or necklace round his neck; he also wears a wig. In front of him are two vertical lines enclosing a space for his name, which has been left blank.

On the opposite side was a similar figure, but now only the kukufa sceptre



and a hand remain to tell of the god that was figured there; on the left are two vertical lines with a space for the insertion of the name.

In the third division is Hathor, or perhaps Nut, in the midst of the sycamore tree. The scene of Nut in the sycamore is the vignette in the 59th chapter of the Book of the Dead, entitled "A chapter of drinking the water in Hades." Hathor or Het-heru, "the abode of Horus," was styled Lady of Heaven, Lady of the Sycamore, and many other titles; she was the daughter of Rā and mother of Horus, and typified the dawn and the evening twilight. She is identified with many goddesses in different nomes of Egypt. In this picture we see her wearing a blue wig, and a necklace upon her breast, and a long garment reaching to her ankles. In her right hand she holds a wand or sceptre, and in her left a libation vase, from which she pours a stream of water that is being caught in the hands of a human-headed hawk, emblem of the soul, Bā.

The translation of the chapter as given by the late Dr. Birch in *Egypt's Place in Universal History*, Bunsen, vol. v., is:

"Oh! Sycamore of Nu(pe)! give me the waters which are in thee. I am the one who took the place in the midst of the hour, guarding the egg of the great cackler; <sup>a</sup> I grow, it grows again; I live, it lives again; I breathe, it breathes again." M. Renouf <sup>b</sup> considers that this sycamore tree, which yields both wind and water, is no other than the rain cloud.

On the opposite side is the figure of a woman standing, probably intended also to represent Hathor or Nut in the Persea tree.

This piece of cloth is far from being the complete shroud or covering of the mummy it enwrapped, but fortunately enough of it remains to exhibit the skill in portraiture of the artists of those times; apart from the head the remainder of the picture is purely conventional.

The other specimen that I have to bring before your notice is a smaller piece of yellow flax linen, portion of a wrapping of a mummy; it measures 25 inches by 24 inches, and it came from Thebes.

Upon the top are two horizontal lines, between which is a line of hieroglyphics, which are continued vertically down the left-hand side of the cloth; it contains the name and history of the deceased Ret-Heru-seshet-f. The upper part of the left-hand side is occupied by the solar bark, in which the youthful Horus or Harpacrat is seated upon a lotus-flower in the centre of the sun's disk, thus symbolizing the rising sun; in front of him is the standard of Horus, in the form of a human-headed lion wearing the atef crown; upon the top of the paddles or oars is the hawk-head of Horus.

<sup>a</sup> When the sun rose it was said the grent cackler or goose had laid an egg.

<sup>b</sup> Hibbert Lectures, p. xiv. Preface.



Beneath this are the figures of Thoth, Sau, Sechhet, and Maât, all in the attitude of walking, with their names placed above them, but these, being badly written, have become illegible. They are arranged between vertical and horizontal lines, in spaces coloured red and yellow alternately.

Tehuti or Thoth, the scribe of the gods, the measurer, said to be self-produced; he typified the moon. He is Ibis-headed and wearing the disk of the moon, with a yellow head covering; his flesh is green and his arms are pendent. He wears a red body garment and a tunic and leopard's skin round his loins.

Sa or Sau, is a form of Râ. He is here represented as wearing a very unusual head ornament, which is one of the hieroglyphics forming his name; he is hawk-headed, has a large black head dress, pendent arms, a collar round his neck, yellow flesh, and a red garment with a leopard's skin round his loins.

Sechhet, beloved of Ptah, typified the fiery dawn. She is shown as lion-headed, wearing the disk of the sun with a uræus in front, a large head dress, and a collar round her neck; her flesh is coloured yellow, the arms are pendent, and she wears a long blue garment which reaches to her ankles.

Maât, goddess of law, was daughter of the sun and lady of heaven. She is human-headed, wearing a large yellow head-covering, in which is the plume, the emblem of her name; a necklace hangs about her neck, her flesh is coloured black, the arms are pendent, and she wears a long red garment reaching to her ankles.

Below is represented the deceased in the form of a mummy, supported and held up by Anubis, the god of burials, wearing the jackal's head, with black flesh tints and yellow head covering, bringing him into the presence of Râ, who is here in the rôle of Osiris, wrapped as a mummy. He is hawk-headed and wears the atef crown and a large head covering, and is here described as the great god, lord of Thebes. He holds the kukufa sceptre with both hands. On the right is a priest whose colour is red, wearing a tight-fitting yellow skull cap and a tunic round his loins, standing pouring a libation from a yellow or perhaps a golden vase over the head of the Osirian or deceased. Above this vignette are two horizontal lines of hieroglyphics, bearing the names of the deceased, the upper space being yellow and the lower one red.

The right hand side of this cloth is occupied by a well-executed portrait of Ret-heru-seshet-f, son of Heruxuti, who has a closely shaven head and face, coloured red. Above his head is a flying scarabæus, emblem of the Resurrection, around his neck he wears a deep collar, and upon his right shoulder is the figure of a hawk with expanded wings; the remainder of the figure, together with the rest of the wrapping, has not been preserved.

This probably also belongs to the first century A.D.

XVIII.—*On Excavations in a Cemetery of South Saxons on High Down, Sussex.*  
By CHARLES HERCULES READ, Esq., Secretary.

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Read November 30, 1893.

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IN the autumn of 1892, Mr. Edwin Henty, in planting trees on his property on High Down Hill, in the parish of Ferring, in Sussex, came upon a number of graves, which, from the character of the relics found in them, were readily determined to be of Saxon origin. Mr. Henty has carefully preserved all that he could secure, but from the unfortunate accident that the men employed in the work were strangers, and not his own workmen, there is reason to believe that a number of the articles found were disposed of to visitors and others.

This, in addition to the fact that no record could be kept of the contents of the individual graves, makes the finds of last year very much less valuable than they would otherwise have been.

There is only one object among them that deserves special mention from its great rarity in this country. (Fig. 1.) This is an example of the *angon*, the barbed iron spear of the Franks. That its use as a weapon was more common among the



Fig. 1. *Angon* or barbed iron spear-head. ( $\frac{1}{2}$  linear.)

Franks and Burgundians than among the Saxons is borne out by its more frequent occurrence in the graves of the former peoples.\* In England it is so rare as to be

\* L. Lindenschmit, *Die Alterthümer unserer heidnischen Vorzeit*, iii. Pl. v.

almost unknown. Mr. Roach Smith figures one found at Strood, in Kent,<sup>a</sup> and a similar weapon from the Roman Wall. The *angon* and its near relative the *pilum* have been treated at considerable length in *Archaeologia*.<sup>b</sup> The High Down specimen is 2 feet 5½ inches in length, with a circular socket and with the barbs lying close to the stem.<sup>c</sup>

Before continuing the planting this year, Mr. Henty, through the kind offices of a mutual friend, invited me to superintend the digging, leaving me a free hand to direct the men to dig where and how I pleased. The men were willing and much interested in the matter, more particularly as local tradition tells that buried in High Down lies a golden calf. This, I may say at once, is one of the things we did not find; but all the objects that were found in the graves this year, as well as a selection from those of last year, are shown to-night by the kindness of Mr. Henty, who has brought them all up to town that they may be laid before the Society.

High Down Hill lies about one mile nearly due north of the village of Ferring, and about two from the sea, the land between the base of the hill and the shore being flat. Upon the top of the hill is a camp, oblong in form, with an opening at the south-west corner, and it is within this camp that the cemetery lies.

The planting last year was in an oblong at the south-west end, not quite parallel with the lines of the camp, and the continuation of the work this year was in the ground lying on the north side of the fence put up to protect the young trees.

In the *Journal of the British Archaeological Association*<sup>d</sup> for 1857 an account is given by Mr. George V. Irving of excavations made by him at Cissbury and High Down. He dug pits in the north-west corner of the camp on High Down and found only a miscellaneous collection of objects, many of them very recent in date. He does not appear to have tried the ground anywhere else within the camp.

In 1867 General Pitt-Rivers (then Colonel Lane Fox) made an extensive series of excavations at Cissbury, and also dug a pit at High Down, somewhat to the east of the middle of the south side, and within the escarpment. His account is printed in *Archaeologia*,<sup>e</sup> where a plan and section of the camp are given.

<sup>a</sup> *Collectanea Antiqua*, vol. v. Pl. xi. This specimen has since been acquired by the British Museum with other antiquities from Mr. Humphrey Wickham's collection.

<sup>b</sup> Vols. xxxiv. 177; xxxv. 48; xxxvi. 78; *pilum*, xlii. 327.

<sup>c</sup> A weapon of similar character 1 foot 8 inches long, found in the Thames, is in the British Museum; and two *pila* from Hod Hill are in the Durdan Collection, now in the same institution.

<sup>d</sup> xiii. 274.

<sup>e</sup> xlii. 27.

Here he found a very curious square pit cut in the chalk rubble, with a smooth floor, and steps leading down to it on all sides; at the south-east corner was a bronze knife-dagger, of which a figure is given on Pl. VIII. of his paper, and at the north-west corner a skeleton extended north-west and south-east. This interment has probably no connection with our cemetery from the direction in which the skeleton lay, but it is curious that, although the inside of the camp has been twice dug into, neither of the investigators chanced to find the Saxon cemetery.

I should mention that General Pitt-Rivers' paper aims at proving that the camp on High Down, as well as others in Sussex, is not of Roman, but of British work, the square form found here and elsewhere being due to the form of the hill top.

There are remarkable discrepancies in the form of the camp as given by Mr. Irving and General Pitt-Rivers, and my own plan, though nearer to that of General Pitt-Rivers, is not quite like either. The one I have made is however merely an enlargement of the 25-inch Ordnance map, and I am not responsible for the form, though it agrees with my observations.

On the morning of the 31st October I began work and found that the workmen had already found one grave (I.), which, however, contained nothing but the skeleton, and that was much decayed.

The next (II.) was more fruitful. Upon the breast were three brooches of bronze gilt, the pins of all three of iron, one on each shoulder and a third near the middle. The two smaller were 1·7 inch in length, with a large oblong plate at the upper end, and a small one at the lower; the middle is somewhat cruciform, with deeply engraved design, probably intended as a conventional representation of two eyes. The larger brooch is 1·36 inch long, of similar outline, but the ornament of the surface is of a different character, recalling the interlaced monsters of a later time. The two conventional eyes, in a modified form, are also found upon this brooch. Nothing remained between the breast and the hips, but here was found a neatly made, though plain, buckle of bronze, slightly plated with tin, and around it a mass of soft clayey matter, which no doubt was all that remained of the leather belt to which it was attached. On the right hip was an iron ring 2·2 inches in diameter, and a small iron knife was lying transversely across the right wrist. On the right humerus were three irregular beads of amber, 0·84 to 1 inch in diameter, and one of the well-known "melon" beads of pale blue porcelain. But the most curious thing was that, in removing the skull, I came upon another pair of brooches, 1·22 inch in diameter, one under the chin and one on

the left shoulder. These were circular, saucer-shaped, and of bronze gilt on the upper face, which was deeply engraved with a continuous loop-coil around a central ring. They are 1·22 inch in diameter, and have pins of iron like the others.\*

The next grave we found (III.) contained only the skeleton and an iron knife lying across the left arm. The following one (IV.) was very little richer, though its greater depth, 4 feet 6 inches, led us to expect better results. It contained only an iron buckle 1·88 inch wide, and a spear-head lying beneath the head, and a tiny bronze mount formed of two plates connected by two rivets. Grave V. contained a spear-head only,  $7\frac{1}{8}$  inches in length, near the head. The next grave (VI.) was more gratifying. Under the left hand was an iron knife, and on the same side, from the waist downwards, lay a sword of the usual type, broad, straight, and double-edged, 2 feet  $9\frac{1}{4}$  inches in length, and having on the surface, when first exposed, considerable remains of the wood of which the scabbard was made. At the pommel was a short cross-bar, and where the mouth of the sheath had been, a flat bronze mount. At the waist, in front, was a richly engraved buckle of bronze, gilt, with the square plate which ornamented the strap at the back of the buckle. This plate has four rivets at the corners, about  $\frac{1}{8}$  inch in length, and these were covered with the remains of the leather strap, as was also the buckle itself. At the base of the tongue of the buckle is a square setting, now empty; it probably contained a garnet or glass paste, but no signs of either remained. From the position of this buckle there can be but little doubt that it belonged to the sword-belt. (Pl. XXVII., fig. 7.)



Fig. 2. Bronze brooch found in Grave VII.  
Full size.

At a depth of 4 feet we came upon the skeleton in the next grave (VII.), and upon the breast, just under the chin, lay a circular bronze brooch, 2·27 inches in diameter, formed of a thin plate, with a circular opening in the centre, in which worked an iron pin, now almost entirely rusted away. Although this opening is only  $\frac{7}{8}$  inch in diameter, the pin was 1·2 inch long, the point passing through a slot cut in the edge of the brooch, and on each side of this slot projects a small rivet, which, when the brooch was in use, prevented the pin from entering the slot and thus unloosing the garment. The upper surface of the

\* A brooch of the same design found at Perlberg, Hanover, is figured in J. H. Müller, *Vor-und frühgeschichtliche Alterthümer der Provinz Hannover*. 1893. Pt. xxii. fig. 212.



brooch is coated with tin and is ornamented with concentric circles produced by punches of three different designs (fig. 2). Across the pelvis was a string of beads, two of them of clear greenish glass  $\cdot 8$  inch and  $\cdot 75$  inch in diameter, and three of amber, rudely shaped, and measuring  $\cdot 64$  inch,  $\cdot 7$  inch, and  $\cdot 72$  inch in diameter. Apparently in the middle of the string of beads was a thick circular disc of gypsum  $1\cdot 42$  inch in diameter and  $0\cdot 64$  inch thick, with a hole through the centre, and near by was a small fragment of the edge of a wooden bucket, with the bronze mount still upon it. How this came to be there I cannot tell, for no trace could be seen of any other parts of the vessel. The bones of this skeleton were much decayed, many of them had entirely disappeared, in fact; but what remained might well be those of a female, which the presence of the gypsum spindle whorl, for that is what I take it to be, would bear out.

The next grave (VIII.) was shallower than usual, being only 2 feet 10 inches deep, and it was the only instance of a body placed otherwise than flat upon its back. It contained the skeleton of a tall man lying upon his left side, with the legs bent, the right arm behind him and the left across his breast, while the chin was upon the right shoulder. That it was a regular burial was shown by the presence of a small pottery cup near the shoulder. It was so friable, and the ware was so intermixed with thread-like roots, that it fell to pieces, but the patient care of my colleague Mr. Griffith has restored it to its original form (fig. 3).



Fig. 3. Pottery vase found in Grave VIII.  
 $\frac{2}{3}$  real size.

The next grave (IX.) contained but few relics. Near the right hand was a string of small glass beads about  $\frac{1}{3}$  inch in diameter, eighteen of clear sapphire colour, ten, much oxidised, of brown glass, and a single flat melon-shaped bead of dark-coloured glass. At the waist was an iron buckle-like object, very much corroded, and having a thin bronze plate attached to it. On one finger of the left hand was a ring, made of a band of bronze, with a flat plate as a bezel, and engraved herring-bone pattern on each shoulder. A second ring of silver, penannular, was found close by the left hand, but I am not sure whether it came from one of the fingers or not. On the right thigh was lying an iron knife, and near the right arm a bronze bodkin or pricker  $2\cdot 94$  inches long.

Grave X. contained the body of a youthful person. At the waist was a small plain buckle of bronze, and a much-worn Roman bronze coin of Domitian pierced



for suspension. On the right arm was a thin bronze wire bracelet 1·7 inch by 1·95 inch, and at the neck a string of beads, a large one of clear yellowish glass 0·88 inch in diameter, one of amber 0·54 inch wide, and nine small ones like those in the last grave, three of them sapphire blue, three of sulphur yellow paste, and three of opaque white; and among them a small bronze coin of Fausta, wife of Constantine the Great, struck at Trèves about A.D. 325; also pierced for suspension.

The next Grave (XI.) contained no remains beyond the skeleton.

In Grave XII. occurred one of the most charming pieces of bronze work that I have ever seen from a Saxon grave. (Pl. XXVII., fig. 8.) It is a small slide 1·84 inch long by 0·90 inch wide. The raised part of the slide is engraved with a lozenge design containing a cruciform object, and the corners are filled up with engraved spirals, and the remains of a silver outline remain round the edge of the lozenge. The two flat ends, by which it was attached to some other object, are pierced to represent two heads of monsters; the form of the necks being accentuated by a silver inlay. This was found lying upon the left side of the chest, and in such a position I cannot imagine what use it served. Had it been near the hips it would have been taken for the slide for the sword-belt on the scabbard of the sword; but in this grave there was no trace of a sword. On the other side of the chest lay a bronze brooch of uncommon type, with, as usual, a pin of iron. The form is not easy to describe, but it has no trace of gilding, the only decoration being five concentric circles. (Pl. XXVII., fig. 4.) Between this brooch and the slide was a mass of rusted iron, about the size of a walnut when first found, though its size has dwindled since, and in the middle of this was a piece of white bronze shaped exactly like the common paper fastener of to-day, in the form of the letter T. What this represents I cannot say.

Grave XIII. made a poor return. We found only an iron knife and a ring near the left humerus. But the following one (XIV.) was far more satisfactory. As soon as the men had got near to the level of the body I began to clear away the chalk at the head, and over the right shoulder appeared iron rust, indicating the presence of a spear-head. In working round this I found that it was lying across the mouth of a glass bowl, which rendered the task a far more delicate one. The spear-head was a good size, 11 inches in length, and the glass turned out to be a mammiform bowl very thin and ornamented with bands of delicate threads. The surface was somewhat oxidised, and coated inside and out with a film resembling in colour the crust of port wine. I think now that this film has been produced only by the decay of the glass, and not by the presence of any liquid in the

vessel. (Pl. XXVII. fig. 3.) Close by the right humerus was a little bronze pin or awl, an iron knife, and an iron object (fig. 4) that I have called a steel for striking fire, for in the mass of rust I found a little piece of flint. I came to the conclusion from the condition of these objects, which were all lying in a mass, that they had all been enclosed in a leather pouch, and that this had perhaps been hung round the neck or from the dress by a strap. Somewhat above them were a few tiny bronze rivets, and small hemispherical caps which had no doubt concealed the heads of the rivets.



Fig. 4. Steel for striking fire. From Grave XIV. Full size.

At this point I was obliged to leave the work, and the remaining graves have been excavated under Mr. Henty's superintendence, with the most excellent results.

Grave XV. was that of a child and contained only a few beads, seven of them of sapphire blue glass, one of amber, and a larger one of glass with a zigzag in white. The next grave (XVI.) was a very shallow one, the skull being only 14 inches from the level of the turf. Just below the jaws, and lying on the collarbone, was a pair of flat circular bronze brooches, with concentric circles of dots, and the surface tinned; the pins both of iron. Beside the left arm was lying a string of sixty-nine glass beads, the greater part of them of the usual sapphire blue, nine of pale, clear yellow glass, two of opaque yellow, and four large ones of clear greenish glass (0.8 and 0.58 inches in diameter) which formed the middle of the row.

Grave XVII. was that of a child, and the only ornaments were some glass beads, ten in all; three of sapphire blue, three of pale blue, two of sulphur yellow, and two of brick-red paste.

Grave XVIII. contained only an iron knife. Near this were found two holes or graves, pointing north and south, one containing disturbed bones, the other containing ashes. These I take it are not connected with the cemetery, for in all other cases the graves were east and west.

Grave XIX. contained a good number of objects. On the right of the head were the three iron hoops of a bucket. It measures 6 inches in diameter, the upper hoop flat, the lower ones narrower and rounded outside. Where the loop

for the handle joins the rim are remains of the usual double-hoop ornament, and upon the upper rim there are traces of woven material. This grave had unfortunately to be hurried as the light was failing, and the positions in the grave are not certain. Many of the indeterminate loops and pieces of iron are doubtless parts of the bucket; but the other articles comprised a pair of iron tweezers,  $2\frac{3}{8}$  inches long, an iron knife, an iron buckle 0.9 inch wide, an iron ring 1.05 inch in diameter, and a spiral silver ring, the last no doubt a finger-ring, 0.85 inch in diameter. The most artistic objects were, however, two bird-shaped brooches of bronze gilt and inlaid with silver, the eyes being discs of garnet in silver settings. The pins were, as usual, of iron.



Fig. 5. Pottery vase from Grave XXI.  
 $\frac{1}{2}$  real size.



Fig. 6. Glass bowl, outside view, from Grave XXII  
 $\frac{1}{2}$  real size.

Grave XX. contained only an iron spear-head, and Grave XXI. only a cup of pottery. This, though anciently broken, probably by the weight of the earth, has been pieced together, and turns out to be a somewhat uncommon type, a rounded body with an ornamental pattern of short lines (fig. 5).

The vigour of one of the men in digging at the next grave (XXII.) ended in disaster, for with a stroke of his spade he ruthlessly shattered a most charming glass bowl,  $2\frac{3}{8}$  inches in height and  $5\frac{1}{4}$  inches in diameter, very much like that

found in Grave XIV. This occurred while Mr. Henty was occupied with another grave, and though diligent search resulted in finding many of the fragments yet some are still missing. This is the more to be regretted, as it differs in ornament from any I have ever seen (fig. 6). Upon the bottom, outside, can clearly be discerned a bold quatrefoil design, now represented in sunk lines, but originally, I think, it was formed of threads of glass; but how these were applied I cannot say. It would seem to require a considerable amount of technical skill and dexterity.

Grave XXIII. had only an iron knife and two bronze mounts.

Grave XXIV. contained two iron knives and a spear-head, and, in addition, the most interesting object yet found, a goblet of thin clear glass, 6 inches high, with a foot, and ornamented with two bands of threads. The glass is of a horny texture, and a noticeable peculiarity in its make is that the bowl and foot are of a single piece of glass, the base of the foot being pressed upwards, like the bottom of a wine bottle, leaving the foot itself partly hollow, so that any liquid put into the goblet would run down into the foot also. (Pl. XXVII. fig. 2.)

Grave XXV. was that of a child, and contained only a small, plain, rudely-made cup, having little more than a family likeness to the ornamented one from Grave XXI.

Mr. Henty has during the last few days dug out Grave XXVI. and found two cruciform bronze brooches, of a type new to this cemetery (Pl. XXVII. fig. 6), a small circular one, tinned (Pl. XXVII. fig. 9), a bronze buckle (Pl. XXVII. fig. 5), and an iron ring.

The next grave (XXVII.) contained only one object, but that was of exceptional beauty and interest. It is a drinking glass of a shape obviously copied from a horn, and most skilfully ornamented with vertical and horizontal lines formed of glass threads,  $11\frac{1}{2}$  inches in height and 3 inches wide at the mouth. One of precisely the same form was found about thirty years ago at Kempston in Bedfordshire, and is now, with the rest of the collection then found, in the British Museum.<sup>a</sup>

Grave XXVIII. contained no relics.

Grave XXIX. had only one object of bronze, a tube embedded in iron rust, two iron buckles with square plates for attachment to a strap, and an iron knife. The bronze tube is oval in section, 2.75 inches in length, and resembles the mount of the sheath of a small knife, such as are commonly found during the seventeenth century. Both ends of the tube are, however, alike in having the two sides of

<sup>a</sup> Figured in *Associated Architectural Societies' Reports*, vii. part 2.

the opening on different planes, one being set back, and the object cannot, therefore, have been a scabbard mount.<sup>a</sup>

In Grave XXX. were two iron brooches, measuring 1·94 inch and 2·25 inches in length, and a circular bronze object, perhaps a brooch. The iron brooches have pins of bronze, and both are of the common Roman form, viz. the upper part a semi-circular arch, the lower a straight prolongation in the line of the arch. Although these are in appearance very unlike the usual Saxon cruciform brooch (of bronze), they are in reality constructed upon the same principle, which is here carried out in its simplest and least ornamental form.

Grave XXXI. contained a string of beads of sapphire blue glass, 0·26 to 0·35 of an inch in diameter, numbering more than sixty; a large bead of dark brown or green glass, 1·25 inch in diameter, ornamented with interlacing threads of white glass (Pl. XXVII. fig. 10); and two cruciform bronze brooches, 2·72 inches and 3·40 inches in length, the ends of the limbs expanded into a semi-circular form.<sup>b</sup>

Grave XXXII. held only one relic, a glass drinking-horn, 6 inches high, quite perfect (Pl. XXVII. fig. 1). This charming object is of clear greenish glass, encircled with horizontal spiral threads interrupted by two bands of zigzag in the same threadwork, one near the middle, the other round the lip. The execution of this glass is far less perfect than that found in Grave XXVII., and it has further been blown in a different manner. The point of this glass is rounded, thus showing that the operation of blowing it was performed entirely from the upper end, that is, the mouth of the glass, without the help of any attachment to the lower end. In the case of the more carefully executed example from Grave XXVII., the lower end has a punt mark, where a rod of glass attached to it in the process of blowing has been broken away.

All the graves were, without exception, dug as nearly as possible due east and west, the head of the body always towards the west. The depths varied from about 2 feet 6 inches to nearly 5 feet. The bodies appear to have been laid upon the bare chalk-bottom of the grave, though in one case there were traces of what seemed to be a thin layer of soil. The filling in was usually chalk rubble next the bottom, above which, in several cases, was a layer of grey material, as if a kind of plaster had been made of the chalk. This grey layer sometimes reached

<sup>a</sup> An object equally puzzling, which illustrates this tube, has been found recently at Croydon, with Saxon remains of a similar character to those from High Down. The Croydon example is cruciform, and the horizontal bar is of the same form as the High Down tube, but the other limb has double bronze plates for the attachment of straps. (Dec. 1894.)

<sup>b</sup> Cf. Akerman's *Pagan Saxondom*, pl. xviii. fig. 3.





PLATE I. — JARVIS MOUND, NEW YORK.



the opening on different planes, one being set back, and the object cannot, therefore, have been a wallhead mount.\*

In Grave XXX, were two iron brooches, measuring 1.94 inch and 2.25 inch in length, and a circular bronze object, perhaps a brooch. The iron brooches had pins of bronze, and both are of the common Roman form, viz. the upper part semi-circular arch, the lower a straight prolongation in the line of the arch. Although these are in appearance very unlike the usual Saxon cruciform brooch (of bronze), they are in reality constructed upon the same principle, which is here carried out in its simplest and least ornamental form.

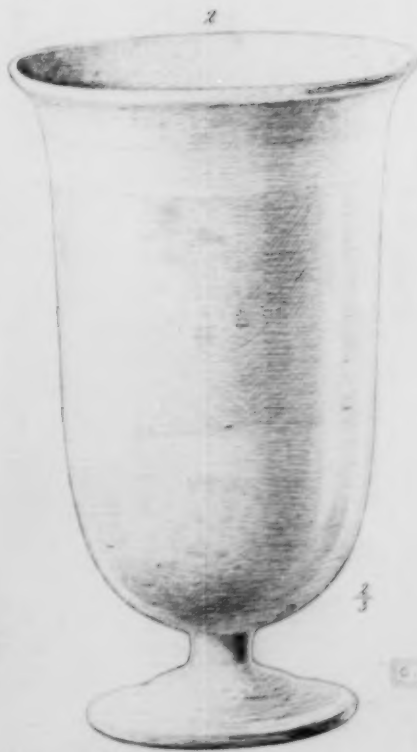
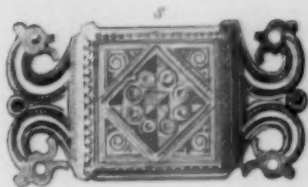
Grave XXXI. contained a string of beads of sapphire blue glass, 0.26 to 0.4 of an inch in diameter, including some dark watery; a large bead of dark brown or golden glass, 1.25 inch in diameter, ornamented with interlacing threads of white glass. (Pl. XXVII. fig. 10), and two small circular bronze brooches, 2.72 inches and 2.9 inches in length, the ends of the latter expanded into a semi-circular form.\*

Grave XXXII. had one, or rather two glass vessels, both 6 inches high, quite perfect (Pl. XXVII. fig. 1). These tall, slender stems of clear greenish glass, encircled with horizontal spiral threads interrupted by two bands of zigzag in the same threadwork, one near the middle, the other toward the lip. The execution of the glass is far less perfect than that found in Grave XXVII., and it has further been blown in a different manner. The point of this glass is rounded, thus showing that the operation of blowing it was performed entirely from the upper end, that is, the mouth of the glass, without the help of any attachment to the lower end. In the case of the more carefully executed example from Grave XXVII., the lower end has a point with, where a rod of glass attached to it in the process of blowing has been broken off.

All the graves, then, without exception, dug as nearly as possible due east and west, the head of the body always towards the west. The depths varied from about 2 feet 6 inches to nearly 5 feet. The bodies appear to have been laid upon the bare chalk-bottom of the grave, though in one case there were traces of what seemed to be a thin layer of soil. The filling in was usually made up to the bottom, above which, in several cases, was a layer of grey material, as if a kind of plaster had been made of the chalk. This grey layer sometimes reached

\* An almost equally puzzling, which illustrates this tube, has been found recently at Croydon, with Saxon remains of a similar character to those from High Down. The Croydon example is cruciform, and the horizontal bar is of the same form as the High Down tube, but the other limb has double bronze plates for the attachment of sticks. (Ibid. 1894.)

\* Cf. Akerman's *Pagan Scandinavia*, pl. xviii. fig. 2.



SAEON OBJECTS FROM HIGH DOWN, SUSSEX.



as far as the upper soil, and when thus found it served as a sure indication of the presence of a grave, though perhaps an empty one. Except in one instance the bodies were laid face upwards and at full length, with the hands by the sides or clasped across the pelvis.

Although there is no apparent design in the arrangement of the graves, yet there was never any overlapping of the various interments, nor in any case did two bodies lie in one grave. The limits of each grave were quite distinct, and though sometimes two were close together, there was no appearance of chance in the selection of the spot. This would lead one to believe that some kind of memorial, more or less of a permanent character, had been placed above the graves; but of this we know nothing, and, I need scarcely say that nothing remained to show whether any memorial had ever existed. With regard to such a possibility there is one point which deserves mention, and that is, that we may assume the surface of the ground within the ancient camp to be, natural causes apart, the same as it was when the cemetery was made. Cultivation would scarcely be attempted, and it is unlikely that the plough has ever lowered by an inch the ramparts of the ancient fortification. If, therefore, any such memorials decorated the resting-places of these Saxon folk, they must have been of a perishable kind, or they could scarcely fail to have left some trace over so large an area.

The skeletons presented no remarkable features, so far as my limited knowledge showed me. The men were mostly of large mould, the thigh-bone being in several instances of a length that would indicate a height of about 6 feet; while one young man of powerful build, lying in a grave 7 feet 6 inches long, appeared to be even taller. But such a rough measurement as can be made with a tape on a skeleton newly uncovered is so little to be relied on that I should hesitate to be more precise. None of the bodies had the appearance of old age, if one may take the state of the teeth as an indication. In only one case were the teeth much worn, and then the wear seemed to be caused by the upper and lower jaws not meeting quite evenly rather than by great age. One unfortunate man had a hole in his skull large enough to admit a finger. Whether this blow was the cause of his death or not I cannot say, but he certainly lived for some time after he had received it, for it had originally been twice as large, and the bone was gradually closing up the hole when he died.

I much regretted that there was not some one present at the digging who had a good knowledge of anatomy; but there appears to be no doctor nearer than Worthing.

I think it is scarcely possible to overrate the importance of such discoveries as the one we have before us. The historical evidence for the history of early Saxon times, more particularly in Sussex, is so very scanty, its doubtful meaning has been so much discussed, and its value as an authentic record so much doubted, that it is only by the help of archaeology that we may hope to arrive at the truth.

The district in which High Down is situated is full of Saxon associations. Nearly all the place-names are of Saxon origin. Ferring itself, Tarring, Goring, Angmering, Worthing, and Lancing, all indicate settlements of tribes bearing these patronymics. A certain number of the names of the Sussex marks occur in the *Codex Diplomaticus*, and many more, among them Angmering, Ferring, Goring, and Worthing, are found in Kemble's list<sup>a</sup> of the marks inferred from local names. Kemble gives (p. 58) an explanation of how these names arose, probably from a number of families or comrades attaching themselves to a renowned warrior, who gives his name to the settlement they have chosen. In process of time the inhabitants become too numerous, and a portion of them are drafted off to a new district to form a new home elsewhere. Thus we find on the Continent names similar to those on the south and east of England, and in England itself there are many having the same patronymic as a root. If, therefore, this hypothesis be a true one, it would not be surprising to find the same types of burial and ornaments at or near two places bearing the same name, and if opportunity should occur it would be interesting to compare Saxon remains from two such places. In the present case, although the cemetery is in the parish of Ferring, it is equally near to Goring. Another place of the same name is on the Oxfordshire bank of the Thames, and, though I know of no Saxon remains from Goring itself, I have thought it of some interest to compare the nearest find to Goring, viz. that from Long Wittenham, with the one now before us.<sup>b</sup> It will be admitted, I think, that in some points there is a very strong resemblance. To go somewhat further afield, the specimens upon the table are very similar in many respects to the important find at Kempston, in Bedfordshire,<sup>c</sup> the most striking likeness being that between the fine glass horn from Grave XXVII. and one from Kempston.

Glass, however, is an unsafe foundation for such a theory, for if, as has been argued, all these glass vessels were importations and not made in this country, it is obvious that similar articles might be found among all tribes reached by the importing traders.

<sup>a</sup> *The Saxons in England*, 1849, i. 456.

<sup>b</sup> *Archæologia*, xxxviii. 327; xxxix. 124.

<sup>c</sup> *Associated Architectural Societies' Reports*, vii. part 2, 269.

Probably the most remarkable feature about the Saxon remains from Sussex is their unlikeness to those of Kent. This may be in part accounted for by the presence of the Forest of Andred, which formed a barrier, if not impenetrable, certainly very dangerous. This would have been enough to make intercourse between the inhabitants of the two counties infrequent, but not to stop it entirely, for the sea was always open, and to such seamen, no impediment. I think, therefore, we may take it that they had no desire for intercourse, and were, in all probability, hostile neighbours.

It is not easy to fix a very precise date for these interments. On one side we are fairly certain, for the burials are pagan, and, therefore, before the conversion of the South Saxons to Christianity, and this, it must be remembered, took place later than that of their Kentish neighbours, viz. in the year 635.<sup>a</sup>

In the other direction we have little to help us. The Saxon Chronicle states, with great precision, that in the year 477 Ælla, with three sons, Cymen, Wlencing, and Cissa, landed in Sussex; that in the year 485 they defeated the Welsh; and in 491 they destroyed the population of Anderida. I do not propose to discuss the statements of the Saxon Chronicle. That has already been done by far more competent hands.

I wish also that I could avoid mentioning the *Littus Saxonicum*. Dr. Guest on the one side, in his learned paper read at the Salisbury meeting of the Archaeological Institute in 1849, argues that the Saxon Shore was an institution analogous to the Marches of Wales, and that the Saxons were kept on the outer side of it. Kemble took the opposite view, and, as it seems to me, the true one, that it was called the Saxon Shore because the Saxons were permitted to settle there. A comparison of the two theories has been made by our Fellow Sir Henry Howorth in a paper on the "Migrations of the Saxons,"<sup>b</sup> one main purpose of which is to prove that the people whose burials we are now discussing came from Holstein and the mouth of the Elbe, and not from Nether Saxony.

I merely mention these matters to show how difficult it is to fix a limit of date on the earlier side. The few Roman coins give us no help; they only show that the burials took place after the middle of the fourth century, and that Roman bronze coins were probably rare, or the owners would scarcely have thought it worth while to convert them into ornaments. The appearance of the cemetery itself would indicate peaceable possession of the district, the interments seem to have been decently and carefully made, and everything in the burials points to

<sup>a</sup> Stubbs's *Episcopal Succession*, 137.

<sup>b</sup> *Journal of the Anthropological Institute*, vol. VII.



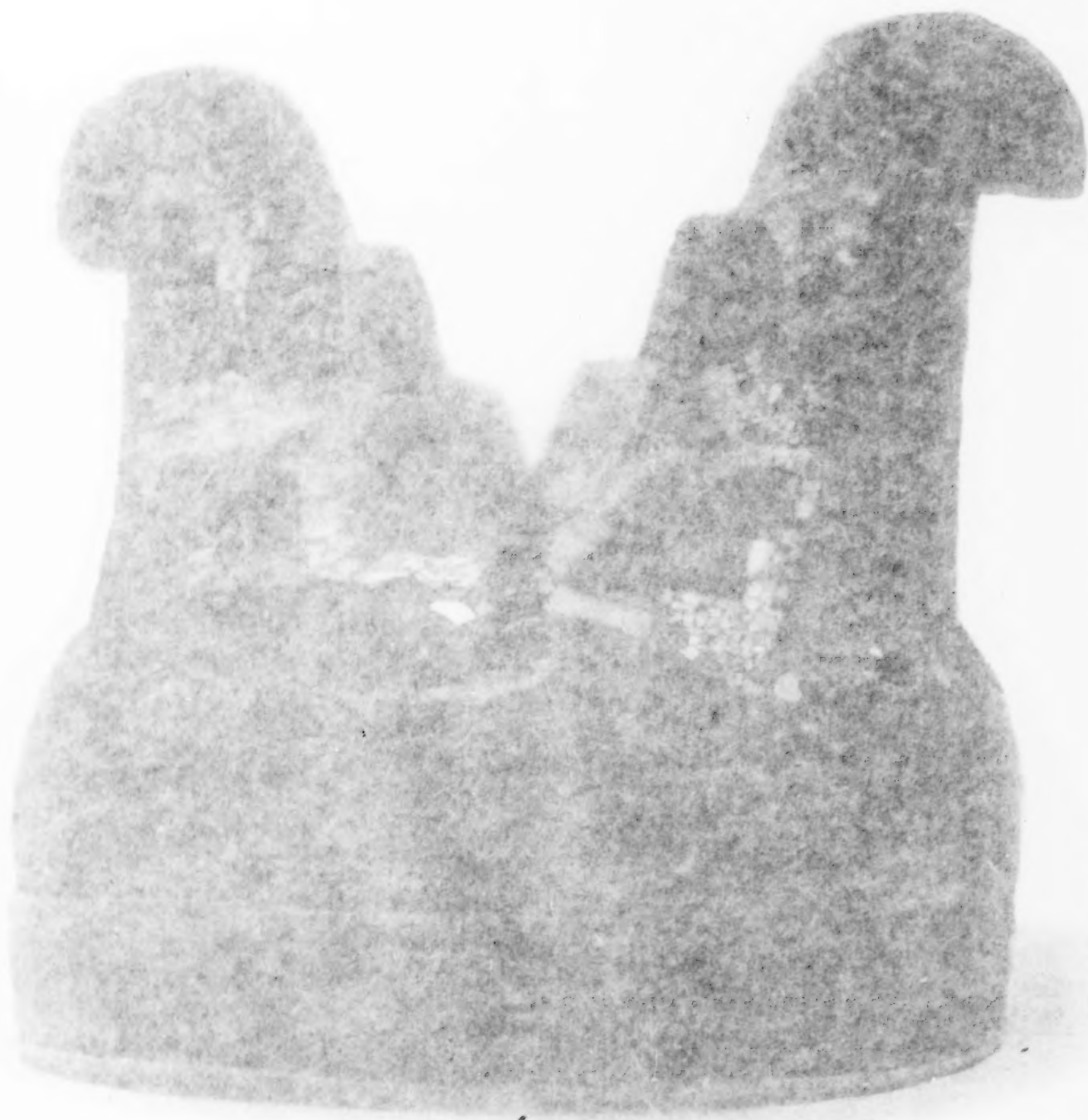
the conclusion that the cemetery belonged to those who held the land. We can at present draw no conclusions from the number of burials, for part remain unexplored, but it seems probable that the settlement to which the cemetery belonged was on the lower land, at Goring or Ferring, each about a mile distant, and this, again, would lead us to believe that the people lived in a state of security. It is, therefore, more reasonable to think that a considerable time had elapsed since the first landing of the Saxons, and I should be inclined, failing more precise evidence, to place this cemetery somewhere towards the end of the sixth century.

Before concluding I think it right to express my thanks to Mr. Henty for giving me the opportunity of exploring this cemetery and for his promise to let me finish the work next autumn.









ANCIENT MEXICAN HEAD, TRUSS, WITH MOSAIC.

XIX.—*On an ancient Mexican Head-piece, coated with Mosaic.*

*By CHARLES HERCULES READ, Esq., Secretary.*

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Read December 14th, 1893.

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It is comparatively seldom that relics of antiquity from the American continent are laid before the Society. There is one good reason for this, in the impossibility, in most cases, of assigning any date to American antiquities. We may be able, from internal evidence, to show that an object was made after the discovery of the continent, and in that case it belongs to the beginning of modern times. If, on the other hand, there is reason for placing it before the time of Columbus, there is little to say beyond the bare statement of that fact. In the absence of intelligible history, it is difficult to see how we are to pass beyond this stage. Among the more civilised peoples, such as the Mexicans and Peruvians, it is easy enough to distinguish and classify the artistic productions of the several great tribes, but to discriminate between the buildings or sculptures of, for instance, the fifteenth and thirteenth centuries is another matter, and one as to which there would probably be as many opinions as men.

The curious object exhibited by the President this evening is, I think, well worthy of your attention on several grounds. As a work of art it is very remarkable, while it belongs to a class of objects of the greatest rarity, and I hope to show that it is of sufficient antiquity to warrant its being brought to the notice of the Society.

It is a head-piece or helmet (Plate XXVIII.), cut from one block of wood, the interior hollowed out to fit the head, and painted green, while the exterior is carved in a symbolical or ornamental shape, with a point at back and front, each descending towards the middle of the head in steps. These two points seem to be intended to represent the upper mandible of an eagle, the beaks pointing upwards. On one side of the helmet a piece of red shell is let in where the eye of the bird would come. The exterior of the helmet, excepting only the lower part between the two beaks and the two outer faces of the beaks, which show traces of red



colour, has been covered with a mosaic of slices of turquoise, malachite, pearl shell, and pink shell. This mosaic has been laid upon a bed of dark brown gum, which is so strong that, although a great number of the pieces of mosaic have fallen out, the shapes of the missing fragments can still be clearly seen in the gum. The design formed by the mosaic is a good deal involved, and from so large a proportion of the mosaic being lost it is not quite intelligible in all parts. Round the lower edge has been a broad border, the design of which has, no doubt, been a series of conventional forms; but of this border there is little now remaining. Above the border, upon the head-piece itself, is a complicated design, which is clear enough on one side, but from the absence of some of the intervening parts is difficult to follow on the other. What is quite clear is, that at the bases of the two peaks of the helmet are the heads of two rattlesnakes, represented in the conventional manner usual in Mexican art, with very prominent fangs and, I think, with crested heads. The bodies of the two snakes, formed of plaques of malachite, cross each other, passing down towards the border, and though something of the same kind appears on the other side, I cannot say with certainty whether it is a continuation of the same design or an independent one. Some of the elements of the design resemble the tails of snakes decorated with plumes of feathers, such as are commonly to be seen in the facsimiles of Mexican codices in Lord Kingsborough's great work.<sup>a</sup> In these codices the rattlesnake plays a very prominent part, standing at times as a glyph, as well as forming parts of the dress of gods or warriors, and when it is thus worn the head of the rattlesnake forms a mask or head-dress, much as the skin of the lion's head is seen upon the head of Hercules.

It is a little remarkable that, as this helmet stands at present, the parts with the smallest amount of decoration are the back and front.<sup>b</sup> Whether any adjunct is wanting it is now difficult if not impossible to say, but at any rate there is, in the present condition of the surface, no sign of any missing portion, and supposing the red paint to be original, the inlaid portions must have been confined to their present limits. The lowest step between the two peaks is also devoid of ornament, but like the ends shows traces of paint. A single piece of turquoise is set in the middle, just over the top of the head, and if this be an original insertion it is, perhaps, unlikely that any ornament such as a plume of feathers was fixed here. But, notwithstanding this, I am inclined to think that

<sup>a</sup> *Antiquities of Mexico*, 9 vols., fol., London, 1838-41.

<sup>b</sup> Francisco Lopez de Gomara, *Hist. de Mexico*, fo. 61 (12mo, Antwerp, 1554), cites among the presents sent by Cortes to the Emperor "Un morrion de madera, chapada de oro, y por defuera mucha pedreria."

this surface in the middle was purposely left plain for the insertion of some feather ornament. I have no doubt that much more of the design would be made clear by comparison with other Mexican representations, but I have been unable to devote very much time to the search. I may say, however, that neither in Lord Kingsborough's work nor in any other of the monumental volumes of Mexican antiquities have I found any head gear at all resembling it.

As the President stated in his anniversary address, he obtained this helmet at the sale of the Bateman Collection. This carries its history back to the year 1854, when it was bought by the late Mr. W. Chaffers in Paris. Beyond this nothing is known. It is only, therefore, by comparison with other objects of the same class that we can arrive at any approximate date. I have already said that those mosaics are extremely rare, and it will be seen that the list of all the known examples will not occupy much time or space.

Writing in 1870, Mr. Edward Stevens, in his admirable work, entitled *Flint Chips*, gives an account of the then known specimens, viz. five in the Christy Collection and two in the museum in Copenhagen. Since that time a good many more have come to light; but, so far as I know, in all cases they have been found in Europe. In the exhibition in honour of Columbus, held in Madrid last winter, there was no sign of this class of work, although the museum of the city of Mexico had sent all its treasures, as did also the museums of Spain. I have recently heard also, that no piece of Mexican mosaic is to be found in the Chicago Exhibition. This seems to bear out the theory which I think the most probable, viz. that all these masks and other articles covered with mosaic were brought from the New World to the Old by the Spaniards at the time of the Conquest, or very soon after that date.<sup>a</sup>

In 1885 my friend Professor Luigi Pigorini of Rome published in the transactions of the *Reale Accademia dei Lincei* an account of the specimens in the museum there, of which he is director, giving at the same time notices of all the specimens known to him. In the same year Dr. Adolf Bastian, the energetic director of the Museum für Völkerkunde in Berlin, printed a short account of two interesting pieces obtained from the Ducal Museum of Brunswick.<sup>b</sup> Later, in 1892, Dr. Franz Heger, of the Imperial Museum of Natural History at Vienna, published a most interesting account of certain mosaics recently discovered in that wonderful treasure-house, the Ambras Collection.<sup>c</sup> The account given by

<sup>a</sup> "The idols were coated with mosaic of turquoise, emerald," etc. Lopez de Gomara, *op. cit.* fo. 121.

<sup>b</sup> *Verhandlungen der Berliner Gesellschaft für Anthropologie*, 1885, p. 201.

<sup>c</sup> *Annalen des K. K. Naturhistorischen Hofmuseums in Wien*, vii. heft. 4.

Professor Pigorini gives the history of those in his museum in some detail, and is illustrated with coloured plates. He states that the whole number known to exist is less than twenty. Of these five are in the Prehistoric Museum in Rome, seven in the Christy Collection in London, one in the Bateman Collection (the example now described), two at Copenhagen, three at Berlin, and one at Gotha,<sup>a</sup> that is, nineteen in all. The history of those at Rome is a very curious one. It had long been known that in the "*Musæum Metallicum*" of Aldrovandus<sup>b</sup> is a woodcut of a mosaic mask described as "*Larva indica variis lapillis exornata, instar Lithostroti.*" This mask is one of the five objects now in the museum at Rome, and Professor Pigorini describes it as follows: It is of wood, the inside showing the natural surface, the outside encrusted with mosaic and coloured. The back is hollowed out so as to fit a human face, and has round the edge several small holes which seem to be ancient. The mosaic on the front is destroyed in several places and it is not easy to understand the original design. The materials used in the mosaic are, malachite, turquoise, and pieces of shell, white, red, blackish, and pearl shell, besides a little garnet and several squares of metal.<sup>c</sup> The cavities of the eyes must have been originally open as they are now, as the edges and inside are coloured red. From the half-opened and similarly coloured mouth issue two white tusks. The tongue projects over the lower lip, is coloured red, and extends to the chin, where it joins an appendage below. This appendage resembles the head of an animal, but it is badly preserved, and it is not possible to say what it represents. Up to the year 1878 this mask was preserved in the museum of the university of Bologna. Of its previous history we only know that it was in the collection of Aldrovandus, who in describing it quotes Francisco Lopez de Gomara for the fact that the Indians were in the habit of making figures or masks from wood and inlaying them with various coloured stones. A comparison of the figure given by Aldrovandus and that of Pigorini will show that there can be no doubt of the identity of the two. The other mask given in Pigorini's plate is published for the first time. It is of wood like the other, and is in all respects of similar make, though the back is not hollowed out to admit a human face. This mask was acquired in 1880 from the *Opificio delle Pietre dure* in Florence, and it is of more interest, from the fact that its history can be traced by inventories back to the middle of the sixteenth century. The earliest

<sup>a</sup> This piece was obtained from Rome. It is the head of a bird, conventionally treated, of wood, hollow and overlaid with mosaic of turquoise and malachite; on the top a human figure is inlaid. The eye sockets empty. Length, 12 inches; width, 5½ inches; height, 4½ inches. (Note by Sir A. W. Franks.)

<sup>b</sup> Bologna, 1647, p. 550.

<sup>c</sup> No doubt iron pyrites.

mention of it is in the *Inventario della Guardaroba Medicea* (1553-1559), where it appears among precious objects of various kinds, viz. :

"1553. Una maschera venuta d'India composta di turchine sopra il legno.

1555. Dall' Illmo Eccmo sig. Duca [Cosimo I.] addi 9 di Marzo, una maschera di legno venuta d'India composta di turchine."

A later inventory (1640-45) mentions two other masks :

"Una maschera di scorza d'albero, commessa tutta di turchine, con un anellino d'oro in bocca, una rosetta di turchine, indiana.

Una maschera di legno indiana, commessa di turchine, la quale notasi che nel dì 31 Agosto 1656 venne data ad Anton Francesco Tofani custode dell' armaria."

This last mask seems to have disappeared from the armoury, and Professor Pigorini has not been able to trace it. There is, however, a possibility that it may be one of the masks now in the Christy Collection.

The mask of bark still remained in the collection in 1783, and appears under the date of 21 December, as follows :

"Una maschera di scorza d'albero, commessa di turchine, con occhi di madreperla, denti d'avorio e piccolo anello d'oro in bocca, con sei piccole turchine e un piccolissimo granato, guasta in parte, con sua custodia di corame nero."

Towards the end of the same year this, with other things belonging to the court wardrobe, was handed over to the Museum of Natural History in Florence, whence, in 1823, it passed with many other worked stones to the Opificio delle Pietre dure.

After referring to the two masks\* preserved in the Ethnographical Collection of the College of the Propaganda, which belongs to the Museo Borgiano, Professor Pigorini proceeds to describe the other mosaics in his museum.

Figs. 1 and 2 in Professor Pigorini's plate represent two handles in the form of crouching figures, one human, the other with a human body and an animal's head with widely opened mouth. Both of them are, like the masks, entirely covered with mosaic, and in the same style. From the condition of the interior of the mouth of the animal, Professor Pigorini is of opinion that a human face has originally been inserted in the mouth, the figure being in reality that of a man with an animal's head as a mask. By comparison with the sacrificial knife in the Christy Collection (Fig. 2), which still preserves its blade of chalcedony, he has come to the conclusion that these two objects are the handles of similar knives. Both of them formerly belonged to Ferdinando Cospi, and are figured in the *Museo Cospiano* (Bologna, 1667), p. 20, as "Due idoli lavorati a mosaico in forma di sfinge."

\* I do not think it necessary to refer further to these masks, for though they are ancient Mexican, they are not ornamented with mosaic.

Professor Pigorini here points out that although Legati, who wrote a description of Cospi's Museum, might well have seen both the figure given by Aldrovandus and that of Liceti in his *Pyromarcha* (Padua, 1634), he makes no mention of either.<sup>a</sup>

The remaining piece of mosaic work in the museum at Rome is a musical instrument formed of a human bone, the left femur, the ball of which has been covered with mosaic, and a few pieces of this still remain. As, however, it has no history it is scarcely worth while to describe it further.

It will be seen from the foregoing extracts that these Mexican mosaics existed in Italy in the middle of the sixteenth century. The account given by Dr. Heger of those recently found in the Ambras Collection, although it does not take us so far back, can be equally relied upon, for the evidence here, as in Rome, is derived from contemporary inventories.

Dr. Heger describes how in searching through the miscellaneous treasures in the Ambras Collection in the summer of 1891, a number of ancient Mexican objects hitherto unnoticed were brought to light by Mrs. Zelia Nuttall.<sup>b</sup> Mrs. Nuttall is well known for her devotion to Mexican archaeology, and when in Madrid last winter, she in the same way discovered a very remarkable Mexican feather shield in the Royal Armoury. Among the objects unearthed by her in the Ambras Collection are two pieces of mosaic work, both of which are figured in Dr. Heger's paper. The first is a circular wooden disc, 42 centimetres in diameter, the front of which is somewhat convex, and except for a narrow border, has been covered with a very elaborate design in mosaic composed of turquoise.<sup>c</sup> At the present time, however, a great deal of the mosaic has disappeared, leaving only the impressions in the bed of gum, but enough remains to show that it was a work of the highest character in its own style. The design consists of two circles, one at the top, the other at the bottom; and the rest of the surface is divided into zones by horizontal lines, and filled up with small human figures apparently in violent action.

Dr. Heger has made very considerable research in Mexican literature, and his conclusions with regard to this object may be summed up as follows: That it formed the centre of a shield; that it was probably covered with leather on the back and edge and had a border of feathers. He identifies it as one of the same class as those given by Montezuma to Cortes, and by implication

<sup>a</sup> Liceti, p. 125, figures a knife-handle similar to those of Pigorini, and to that shown in Fig. 2.

<sup>b</sup> *Annalen des K. K. Naturhistorischen Hofmuseums*, vii. 379.

<sup>c</sup> *Annalen*, *ut supra*, Pl. XVIII.

as those sent by Cortes to Charles V. Prescott<sup>a</sup> gives among the presents received by Cortes, sixteen shields of precious stones with feathers of various colours hanging from their edges. Further, Dr. Heger identifies this class of shield as belonging to the god Paynal, who in one place is described as carrying a blue shield, and in another as having a shield set with turquoises. This he derives from the history of Sahagun, who further states that these shields were imported from Tabasco.

The second mosaic from the Ambras Collection is the head of an animal, 9·7 centimetres in length, made of light-coloured wood, covered with an inlay of pieces of shell, jadeit, turquoise, and thin pieces of glass [? obsidian].<sup>b</sup> This example is of a different make from the others hitherto mentioned, and is executed in a much rougher and bolder style.

The earliest mention of these two objects is in the inventory for the year 1596, where there appears, on fol. 443, "Ain Musaica mit stainlen darynn"; and on fol. 478, "Ain Kopf von ainem Thürr von allerlay farben Stainen gemacht, so die Haiden angebetet."

The same entries reappear in the inventories of the years 1613, 1621, and 1663, as well as in several later accounts.

The most complete account of these mosaics that has ever appeared in England is that given in *Flint Chips*, by Edward Stevens. This book is now twenty-three years old, and since its publication the number of known examples has trebled. An account was given in 1888, by Dr. Richard Andree, at the Congress of Americanists held in Berlin in that year. This, however, does not include those just described from the Ambras Collection, nor the one before us this evening, all three objects of the first importance. I have therefore thought it worth while to take this opportunity of putting together the main facts connected with the subject.

Since this account was read before the Society the Christy Collection has had the good fortune to acquire another example of this rare class of objects, thus raising the total number in the British Museum to nine.<sup>c</sup> This is the remarkable breast ornament in the form of a snake with two heads, shown in Fig. 6, and described as No. 6 in the following list. In common with the majority of these mosaics, it comes from Italy, having been for many years in an old collection in Rome.

<sup>a</sup> *Conquest of Mexico*, Philadelphia, 1874, i. 357n.

<sup>b</sup> *Annalen*, Pl. xxii.

<sup>c</sup> The total number known is thus twenty-two, viz. Christy Collection, 9; Rome, 5; Berlin, 3; Copenhagen, 2; Vienna (Ambras), 2; Gotha, 1.



As it was long doubted whether turquoise was found in Mexico, I have asked Mr. Rudler, of the Museum of Practical Geology, to be good enough to write the note on the subject which will be found at the end of the paper. This will be found to give ample references to the existing literature.

MEXICAN MOSAICS IN THE CHRISTY COLLECTION (BRITISH MUSEUM).

No. 1.

Human skull (Fig. 1), the back of which has been cut away, and the front covered with mosaic of five transverse bands alternately of obsidian and turquoise; the chin, forehead, and from the upper lip to the top of the cheek-bones



Fig. 1. Front of Human Skull covered with ancient Mexican mosaic work. ( $\frac{1}{4}$  linear)

being of obsidian, while the two intervening bands are of turquoise. The eyeballs are formed of convex discs of iron pyrites set in circles of white shell. The bones of the nose have been somewhat cut away, and slices of pink shell inserted in the opening. The back of the skull is covered with buff leather, which forms

a border round the edge, and is used to form a hinge for the attachment of the lower jaw. Two long straps are passed through the edge of the skull above the temples. The lower jaw contains fifteen teeth, the upper eleven; in the former one canine tooth is wanting, and in the latter three incisors and one bicuspid; but several are inserted in the wrong places. All are in excellent state, and no signs of decay are visible. Sir Richard Owen was of opinion that the skull was that of a man of about thirty years of age. The leather inside the skull has the remains of red colour. There can be no doubt that the alternate bands of turquoise and obsidian are not a fanciful disposition of the materials by the artist, but represent some definite design which may have been the tribal mark of the deceased, or that pertaining to his office. Such bands of colour are found not only on masks, but on living subjects in both parts of America. The use of the skull as now prepared was in all probability to tie round the waist of a god or priest, in the manner frequently represented in both MSS. and on the monuments. From (1) a collection in Bruges (sold c. 1845) and (2) Hertz collection. Figured in Brasseur de Bourbourg, *Monuments anciens du Mexique* (fol. Paris, 1866), pl. 43; in E. G. Squier, *On the Chalchihuitl of Mexico and Central America* (New York, 1869), p. 10; and in Brocklehurst, *Mexico of To-day* (8vo, London, 1883), pl. xxxiii. Height, 6·3 inches.

No. 2.

"Sacrificial knife" with leaf-shaped blade chipped in honey-coloured chalcedony. The handle is of soft, light-coloured wood carved in the form of a

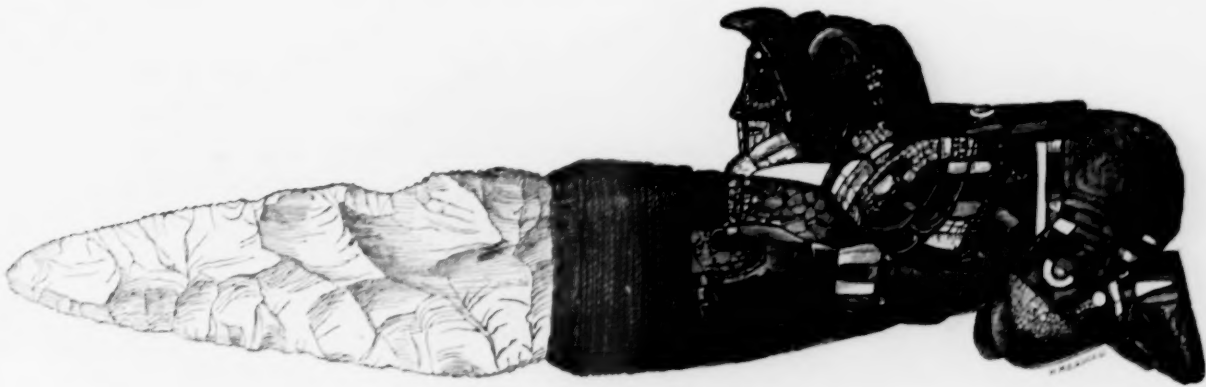


Fig. 2. Sacrificial Knife with mosaic-work handle.

crouching human figure (Fig. 2). The actual socket in which the blade is fixed

proceeds from the chest of this figure, who clasps it with a hand on each side, and rests his chin upon the top; the socket is firmly bound with cord, apparently original. The figure and the socket up to the binding have been covered with mosaic, chiefly of turquoise, but varied with malachite and shell, white, pink, purple, and orange, as well as a few pieces of pearl shell. Much of the mosaic has however now disappeared, though enough remains to give a fair idea of its original glory. The figure wears an eagle mask, with outspread wings reaching nearly to the elbow of the man. His face, just an inch in length, appears through the widely opened mouth of the bird, and bears the same grim character as the larger masks; pendent from the septum of his nose is a nose-ornament of malachite entirely covering the middle part of his mouth. The beak of the eagle has still some pieces of its original covering of purple shell, and the wings are ornamented with similar shell, varied with malachite and turquoise. Upon the man's back is an apron-like garment formed of stripes of malachite and white shell with three circles, each formed of two semicircles of pink and white shell; he wears anklets and bracelets, the latter apparently of feathers represented by pink shell; he has a belt round his waist and wears short drawers covering his thighs; upon his chest is a rectangular design formed of small slabs of white and purple shell and malachite. Hertz Collection; obtained in Florence or Venice. Figured full size, in colours (but not very accurately) in Brasseur de Bourbourg, *Monuments anciens du Mexique*, pl. 44. A small woodcut is also in E. B. Tylor's *Anahuac*, p. 101, and it is described on p. 338. Length,  $12\frac{1}{2}$  inches.

## No. 3.

Mask of cedar wood, formed of two rattlesnakes entwined to represent a human face (Fig. 3), the whole of the front covered with mosaic of turquoise, bright blue and dull green, so that the two snakes are distinct in colour. The bodies of the snakes form the nose and mouth, and curve in circles round the eyes, and the two tails project towards each temple from the centre of the forehead, so that the rattles are upon the temples. Each snake has three of these appendages, modelled in the same gum which forms the bed of the mosaic. So fragile a substance as this gum would, however, scarcely be allowed to form the actual surface, and it seems probable that it originally was coated with gold, like the cup on the back of the cat-like animal (No. 8). Each snake has attached to its tail a pendant of three feathers, and beneath these on the cheeks of the mask has been perhaps a continuation of these pendants, as well as the heads of

the snakes, but unfortunately these portions have been broken away. The mouth of the mask is slightly open, and has had seven teeth of white shell in the



Fig. 3. Ancient Mexican mask of cedar wood, covered with mosaic work.

upper jaw, four of which still remain, and there is a slit over each eye, and a hole on each temple for a cord to suspend the mask when worn. The inside is coloured a deep red. The eye-sockets have never had anything set in them to represent the eyes. The wood of this mask has the appearance of much greater age than in any of the other specimens.\* From the Demidoff Collection; bought in Paris, 1870. Height, 6·9 inches; width, 6·6 inches.

No. 4.

Circular disc of cedar, 12·25 inches in diameter, the centre filled with mosaic of turquoise and shell, leaving an edge of plain wood 0·8 inch wide, pierced with holes about 1·25 inch apart (Fig. 4). The centre of the design consists of a circle in relief, the edge of which is divided into four equal parts by  $\wedge$  shaped

\* Lopez de Gomara (fo. 106) describes four masks of gilt wood, encrusted with mosaic, and (fo. 309) states that, at the death of a king, masks were placed on the idols.

points in pink shell, and each quarter of the circumference has three large but irregular pieces of turquoise at intervals. The elements of this design are the

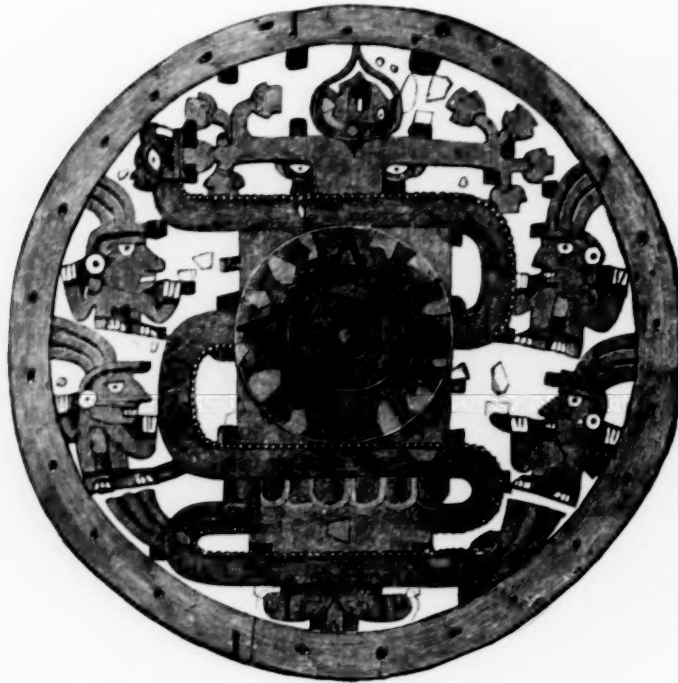


Fig. 4. Ancient Mexican cedar-wood panel covered with mosaic work. ( $\frac{1}{4}$  linear.)

same as those of the famous "Reloj de Montezuma," or calendar stone, now inserted in one of the towers of the cathedral of Mexico, though this latter being over 11 feet in diameter is executed with greater detail. This circular calendar, if it be one, is enclosed within a square of the size of its diameter. This square may be continued downwards to the circumference, but in the present state of the mosaic this is uncertain. The figure of a snake disposed meander fashion embraces the whole middle part of the mosaic, the head being on the left hand upper side; one edge of the snake is bordered with imitation studs formed of brown gum, of which a few are still covered with their gold plates. The tail of the snake ends in three feathers at the bottom of the circle. Beneath this is a bifurcation corresponding with a similar one at the top of the circle, but in this upper one the two arms extend in opposite directions and each terminates in four branches with floriated ends. Resting upon the bifurcation is a pear-shaped

enclosure, in which is a human figure lying upon his back. At each side of the mosaic are two conventional human figures with upraised hands and all facing inwards. Each figure wears an ear-plug of pearl shell and a head-dress of three feathers. Through the mosaic and the wood upon which it is fixed are pierced a great number of holes, of a size and shape to suit the design and at convenient points. (The wood-cut, Fig. 4, is diagrammatic.)

Purchased in 1866 from a dealer who stated that it came from Turin.

Although the primary use of this disc may not be that of a calendar, yet the resemblance between it and the calendar stone in Mexico city is so intimate that it may safely be assumed to have some reference to the seasons of the year. Mrs. Nuttall's arguments in favour of these discs being the central ornaments of shields, would not be affected by such an interpretation. There is no doubt that the whole design is symbolic in the highest degree, but the proper interpretation is not yet forthcoming.

No. 5.

*Presented by SIR A. WOLLASTON FRANKS, K.C.B.*

Pendent object of white wood carved in the form of an ape-like head with open mouth, the whole of the front covered with a mosaic of turquoise, malachite,

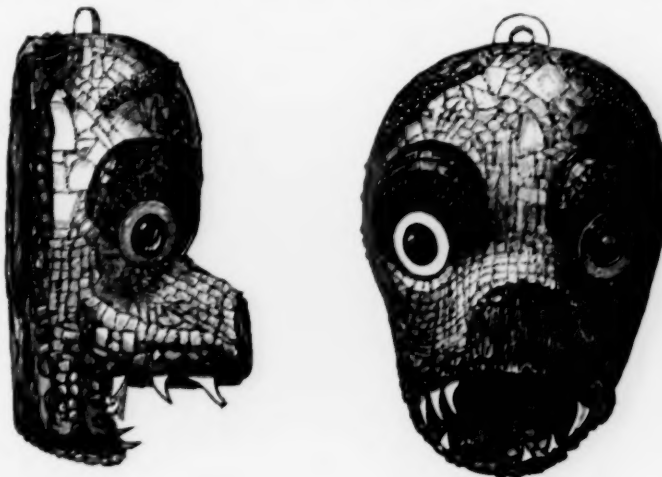


Fig. 5. Ancient Mexican pendant, covered with mosaic work. ( $\frac{1}{2}$  linear).

and other stones (Fig. 5). The back has a hemispherical depression, still coated



round the sides with a thick layer of rich brown gum, finished to a smooth surface, and having woollen threads running through it. The turquoise mosaic is chiefly of the pale greenish kind, but above the sides of the mouth are two patches of bright blue stone. Each eye is set in the lower edge of a protuberance coated with malachite, the eyes themselves being formed of convex discs of iron pyrites highly polished, set in a ring of yellowish shell. This specimen has been much restored, but fortunately the restorer has used white wax as the bed for the new portions. These are: the inside of the mouth, now covered with polished squares of almandine and cabochon rubies, while the jaws are set with small sharks' teeth; the space above the eyes, where are two eyebrows formed of seed pearls; and the outer edge, where pieces of the original mosaic have been broken away and carelessly replaced with malachite, beryls, etc. Obtained from the same dealer as the last, who obtained it from North Italy. Height, 4 inches; width, 2.7 inches.

No. 6.

Breast ornament in the form of a snake with two heads, the body disposed in loops meander fashion (Fig. 6). The foundation is of light-coloured wood, hollowed



Fig. 6. Ancient Mexican breast-ornament formed of a two-headed snake, covered with mosaic work.

at the back to lessen the weight. The front of the body of the snake is covered with mosaic of turquoise, a row of large irregular pieces following the middle of the body. The two heads are of like design, conventional in character; each has

the mouth open, the teeth and fangs made of white shell, or when the original shell has disappeared it is replaced by a tooth of white wax. The edges of the gums are indicated by a band of pink shell. The sockets of the eyes are now empty, but it is clear that a disc, no doubt of iron pyrites, has been set in each of them. Each snake has across the nose a raised ornamental band of turquoise and red shell, and the nostrils are indicated in the latter material. A pendent ornament has originally hung from the lower jaw of each head, which is carefully pierced for the passage of a small cord. The heads are both carefully finished with mosaic on both sides, though the rest of the back is of wood stained red. On the upper edges of the two loops formed by the body are two holes for suspension. Length,  $17\frac{1}{8}$  inches; height, 8 inches. From an old collection in Rome.

No. 7.

Mask of cedar wood cut to fit the face, the outer surface entirely covered with a mosaic formed of minute slabs of turquoise of a brilliant colour beneath the eyes and on the forehead, while on the other parts of the surface the colour is a poor greyish green. The face is studded with irregularly shaped cabochon turquoises, like warts. The eyes, nostrils, and mouth are all pierced; the first are filled with pointed oval pieces of pearl shell, each with a circular hole to represent the pupil, and the gum surrounding the shell and keeping it in position is gilt. In the half-open mouth is a row of seven teeth, represented as incisors in the upper jaw; these are of white shell. On each temple is set a square of pearl shell, pierced with a hole, doubtless for a cord to pass through and round the head of the wearer of the mask. The inside of the mask is coloured red. Height,  $6\frac{1}{2}$  inches; width, 6 inches. From a collection in Florence (or Venice), sold about 1830, bought by a Mr. Descriever, from whom it passed to Mr. B. Hertz, at whose sale Mr. Henry Christy bought it. (It is said to have belonged to a convent at Mozza (? Mozzo). Described in E. B. Tylor's *Anahuac* (London, 1861), p. 338. Figured full size in Brasseur de Bourbourg, *Monuments anciens du Mexique* (fol. Paris, 1866), pl. 43.

No. 8.

*Presented by* SIR A. WOLLASTON FRANKS, K.C.B.

Figure of an animal of the feline tribe squatting upon its haunches, with open mouth and protruding tongue, and having upon its back a circular cup-

shaped receptacle; the whole is cut from a solid block of hard, pale-brown wood: the fore legs are very human in character. Ithyphallic. Almost the whole surface has been originally covered with mosaic laid in a bed of black gum, the tesserae being chiefly of turquoise, varied with pink shell, malachite, a few fragments of iron pyrites, and some large, coarsely-shaped pieces of pearl shell, the last being, perhaps, later additions. Upon each shoulder, and behind each ear, is a circular design in mosaic, and traces of a similar circle remain on the top of the head, and a lozenge-shaped design is seen upon each thigh and on the outside of the upper arms. The cup-like object on the animal's back is now covered with a transparent varnish, except at one part of the outside, where traces of black gum and fragments of mosaic remain. The transparent varnish shows here and there fragments of leaf gold, perhaps indicating that the cup was once gilt. Height, 6·8 inches. Obtained from the late Mr. Joseph Mayer, without history.

#### NOTE ON MEXICAN TURQUOISE.

By F. W. RUDLER, Esq., F.G.S.

It is believed that the principal ancient workings for turquoise were in the trachytic rocks of Los Cerillos, a locality in New Mexico, about twenty miles south-west of Sante Fé. The mountain in which the old mines are situated has been called, in modern times, Mount Chalchihuitl, since Professor W. P. Blake, who first described the locality, believes that the bluish-green turquoise may be identified with the ancient Mexican *chalchihuitl*. The débris of the workings at Los Cerillos may be found covering at least 20 acres. Other old workings for turquoise, though much less extensive, were discovered by Blake at a locality now called Turquoise Mountain, in Chochise County, Arizona.

For description of the Mexican turquoise, see papers by W. P. Blake in *The American Journal of Science* (ii.), vol. xxv., 1858, p. 227; *ibid.* (iii.), vol. xxv., 1883, p. 197; B. Silliman, jun., *ibid.* (iii.), vol. xxii., 1881, p. 67; F. W. Clarke and J. S. Diller, *ibid.* (iii.), vol. xxxii., 1886, p. 211. An excellent account will also be found in Mr. G. F. Kunz's work, *The Gems and Precious Stones of the United States*, 1890.

The Society is indebted to the Trustees of the Christy Collection for the loan of the blocks illustrating this paper.

XX.—On a MS. Psalter formerly belonging to the Abbey of Bury St. Edmund's.  
By the REV. E. S. DEWICK, M.A., F.S.A.

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Read December 14th, 1893.

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THE MS. Psalter, which is exhibited by our Fellow the Rev. Canon Cooke, by the kind permission of the Governors of the Grammar School of Bury St. Edmund's, is a fine example of an English monastic service-book, and is of interest because it can be shown by internal evidence to have belonged to the great abbey of St. Edmund.

An inscription at the beginning of the book<sup>a</sup> records the fact that it was once in the possession of James Cobs, Esq., and that it was presented to Bury School in 1706 by his grandson, James Harvy, formerly an alumnus of the school. There is no other entry which gives direct evidence as to its ownership.

The contents of the book are as follows: Calendar, Psalms of David (fo. 1),<sup>b</sup> Canticles (fo. 112), Litany and *Preces* (fo. 123), *Placebo* and *Dirige* (fo. 128), Canticles for Christmas and other holidays (fo. 133), *Hymnarium* with musical notation (fo. 139 b.); and in a later hand the anthems, responds, and versicles, all noted, of the choir service of the Feast of the Visitation (fo. 172), and the same with the addition of *capitula* and collects for the service of the Holy Name (fo. 179 b).

The leaves measure  $17\frac{1}{2}$  by  $12\frac{1}{4}$  inches, and they are 188 in number. With the exception of the Calendar (which is written on six leaves) the book is made up of quires of eight leaves each. No signatures can now be seen, but catch-words connect the last page of each quire with the following.

In its present condition the book can hardly be said to be "bound." Its limp vellum cover is a poor protection to it, and many leaves are loose.<sup>c</sup>

<sup>a</sup> Hunc librum olim Jacobi Cobs Armigeri | Dedit nobis in Bibliotheca Scholæ Buriensis | Servandum | Jacobus Harvy Jurisconsultus ejus | ex filia Nepos | et hujus Scholæ aliquando | Alumnus | An. Domini | 1706.

<sup>b</sup> The figures refer to the present numbering of the leaves, which takes no notice of the Calendar. Two leaves between 149 and 150 have been overlooked and left without numbers.

<sup>c</sup> Since this was written the MS. has been suitably bound.

I now proceed to describe the component parts of the book.

The Calendar does not offer many points of interest. It is now loose, and although it ranges in size with the rest of the book, it does not seem to have originally formed part of it. For whilst the binding of the Psalter is sewn on *six* bands, that of the Calendar is shown by traces of stitching which remain to have been on *seven* bands. Moreover, the first leaves of the Psalter have received serious damage, whilst the Calendar is in good condition, and if it had always been in its present place it could hardly have escaped the injury which has affected the Psalter. The last page also bears traces of the impression of an illuminated border of different design from that now facing it.

This evidence is further confirmed by the contents of the book. The Psalter and the rest of the book will be shown to be of Benedictine Use, adapted to the abbey of St. Edmund, whilst the Calendar appears to be secular, and it is merely the variation of the Sarum Calendar which was followed in the diocese of Norwich.<sup>a</sup>

From the festivals entered in this Calendar we may conclude that it was written about the beginning of the fifteenth century. It contains the feasts of St. David (March 1), St. Chad (March 2), and St. Wenefred<sup>b</sup> (November 3), which were ordered by Archbishop Walden in 1398 to be observed by the clergy as feasts of nine lessons,<sup>c</sup> and the observance of which was again enjoined by Archbishop Chichele in 1415,<sup>d</sup> *cum regimine chori et ix lectionibus*. But the feast of St. George, which was ordered by Archbishop Chichele in 1415 to be observed as a greater double by people as well as clergy, appears in this Calendar in black letter, whereas other feasts of importance are in red, and the principal feasts

<sup>a</sup> The Norwich additions consist of St. Felix, apostle of East Anglia (March 9), Translation of St. Edmund (April 29), St. Dominic (August 5), St. Francis (October 4), and the Dedication of Norwich Cathedral Church on September 24. In this Calendar the last feast has been added by a later hand.

The Calendar used in the abbey of St. Edmund may be partly reconstructed from the imperfect MS. Ordinale for the Use of the Abbey, now in the British Museum (Harl. MS. 2977). It included the two feasts of St. Jurmin and of St. Botulf, and other festivals not found in the Calendar of the MS. under consideration.

<sup>b</sup> The entry in this Calendar is: "Sancte wenefrede uirginis et martyris uiue." The last word is readily explained by the story of this saint's martyrdom, as related in the *Golden Legend*. After her head had been smitten off by Cradok, a "cursyd Tyraunt ful of malyce," it was replaced by St. Beuno and again united to her body, but "ener as longe as she lyued after, there appiered aboute her necke a rednes round aboute, lyke to a rede threde of sylke, in sygne and token of her martyrdome." (Ed. W. de Worde, 1498, fo. ccxiii.)

<sup>c</sup> Wilkins, *Concilia*, iii. 234.

<sup>d</sup> Wilkins, iii. 376.

and doubles are mostly in blue. So, too, the two feasts of St. John of Beverley (May 7 and October 25) are not noticed, whereas they were ordered by Chichele in 1416 to be observed in commemoration of the victory at Agincourt, gained as it was believed by the assistance of St. John of Beverley.<sup>a</sup>

We are therefore disposed to place the Calendar between 1398 and 1415, a date which seems to be supported by the character of the writing.

The Calendar was apparently in use in the time of Henry VIII., for the title *papa* and the name of St. Thomas of Canterbury have been erased; and an excess of zeal has caused the name of St. Thomas the Apostle to be deleted on December 21.

The Psalter is written in a bold hand in double columns of twenty-two lines to a page, and from the style of writing and decoration it may be assigned to the first half of the fifteenth century. The psalms alone are given, without anthems, versicles, and responds, the beginning of each psalm being marked by a large capital letter. It is evident that it was not written for use after the Gregorian distribution of the Psalter, which was followed in the Church of Sarum and in other non-monastic uses of the Western Church; but it must have been intended for use according to the Benedictine distribution, because those psalms (*e.g.* ix. xvii. xxxvi),<sup>b</sup> which are divided into two parts by that distribution (in order to make up the number to be said according to the rule of St. Benedict), are sometimes written as if they were two separate psalms, the second portion having a large capital letter of its own. In other cases the word *Gloria* or the letter G marks the *divisio*. A later hand, probably about the beginning of the sixteenth century, has written in the margin the days and hours for which the several psalms were to be said in the weekly course according to the Benedictine rule; thus Ps. i. has in the margin "*feria ij ad primam*," Ps. xx. "*Dominica die ad matutinas in primo nocturno*," and so on, all of which give the Benedictine distribution and not the Gregorian.

In the matter of decoration, however, this Psalter follows the plan of those in which the Gregorian distribution determines the ornament. The Psalms chosen for decorative treatment are i., xxvi., xxxviii., li., lii., lxviii., lxxx., xcvi., cix. Of these, Psalms i., xxvi., xxxviii., lii., lxviii., lxxx., xcvi. are the first psalms of the first nocturns for Sunday and the following six days of the week respectively. Psalm cix. is the first of Sunday evensong, and Psalm li. marks the commencement of the second third of the Psalter. Psalm ci. is not specially distinguished here, though in Psalters of earlier date it often receives decoration in order to mark the commencement of the concluding third portion of the Psalter.

<sup>a</sup> Wilkins, iii. 379.

<sup>b</sup> The numbers of the Psalms refer to the Vulgate.



In the special ornamentation attached to Psalms li. and ci., we have a surviving trace of the ancient use which divided the Psalter into three parts, one of which was to be said on each week-day.\*

It is interesting to notice that the Peterborough Psalter of Robert de Lindsey (now in the library of this Society) and other Benedictine Psalters also follow the Gregorian in the matter of decorations, so that prominence is given to psalms which do not commence the first nocturns in the Benedictine distribution.

The decoration of the MS. under consideration commences on the first page of the Psalter, which is encircled with a tree of Jesse. The recumbent figure of Jesse is in the base of the page; three kings are on the left margin and five prophets on the right, and the figure of Our Lady with the Holy Child is placed at the left upper corner. On this page also the first psalm has a picture of David playing on a harp.

Psalms xxvi., *Domineus illuminatio mea* (fo. 17 b), has a picture of David dressed in parliament robes kneeling on a chequered pavement before an altar and pointing to his eyes. The hand of Providence is seen above him. The altar is flanked by green curtains or "ridels," which are fringed with white and red, and do not reach to the ground. The altar itself appears to be of stone, and is vested with a plain green frontal and super frontal of the same colour. It is covered with a white cloth, and a green frontlet with a fringe of red and white appears to be sewn on its front edge. (Plate XXIX., fig. 1.)

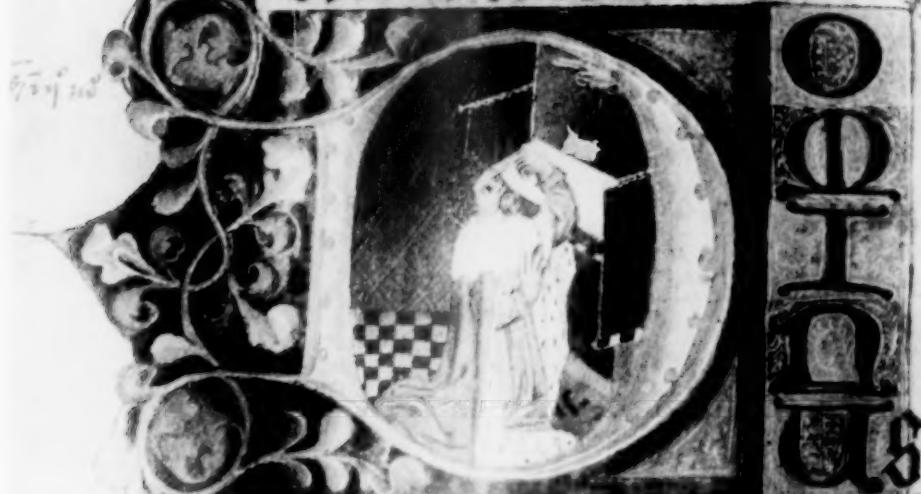
Psalms xxxviii., *Dei custodia* (fo. 28), has a representation of King David kneeling and pointing to his lips. Above him is seen the Almighty. (Plate XXIX., fig. 2.)

Psalms li., *Quid gloriaris* (fo. 37 b), has David and Goliath. David is armed with a sling and a small target, which bears his arms, *azur, a harp argent*. Goliath is armed with a spear, and is protected by plate-armour, such as was worn at the beginning of the fifteenth century, which agrees with the date of the MS., and he further carries a large shield which, in defiance of the laws of blazonry, is charged with a black wyvern on a red ground.

\* This custom still holds ground, in theory at least, in some portions of the Eastern Church. A. J. Maclean, *East Syrian Daily Offices*, 1894, p. 17.

\* Mr. W. H. St. John Hope has since pointed out that in one of the smaller letters of the illuminated initial of Psalm xxvi. (see Plate XXIX., fig. 1) is a drawing of the royal arms. Though somewhat faded it is clear that the French quarters each contained four fleurs-de-lis; the arms are therefore anterior to 1408, in which year the three fleurs-de-lis first appear on the great golden seal of Henry IV. The date of the MS. must therefore fall between 1399 (the arms of Richard II. being different) and 1408.

directo: in ecclesijs bene  
dicam te domine.



illuminatio mea et sa  
lus mea que timebo.

salutis mee.



quodiam uas meum in



Psalm lii., *Dixit insipiens* (fo. 38), has an interesting picture of King David with a court fool before him. The dress of the fool is remarkable. He wears red stockings and a pale green tunic, the right sleeve of which is cut away, leaving the right arm and part of that side of the body bare or covered with a tight-fitting garment of flesh colour. He carries a red staff with a long bladder at the end of it, and his head-gear is surmounted by a wyvern's head. The fool is pointing upwards, as if in the act of saying, *Non est Deus*. (Plate XXX., fig. 1.)

Psalm lxviii., *Salvum me fac deus, quoniam intraverunt aquae usque ad animam meam* (fo. 48 b), has a picture of a nude figure in water which reaches above his waist. In Psalters of the thirteenth century the subject in this place is generally Jonah thrown overboard with the whale waiting to receive him; but in the fifteenth century the subject is changed to King David unclothed, but with a conventional crown on his head, lying in water or wading in water which reaches above his waist. In the picture before us King David is probably intended, although the crown has been dispensed with.

Psalm lxxx., *Exultate deo* (fo. 61), has David playing with hammers on six bells, with his harp beside him.

Psalm xcvi., *Cantate domino* (fo. 73), has a choir of six men, some in surplices, some in albs, with a "ruler" behind them in a blue cope. The choir-book from which they are singing rests on a lectern, which seems to be of wood. (Plate XXX., fig. 2.)

Psalm cix., *Dixit dominus* (fo. 86), has the representation, which is usual in this place, of the first two persons of the Trinity seated, with the dove, the symbol of the third person, between them. Beneath the feet of the seated figures are seen some rather repulsive demons.

We now leave the Psalms, and passing over the Canticles, which do not call for special remark, we come to the Litany, which is in the same hand as the Psalms, and is the first part of the book which clearly allocates it to the abbey of St. Edmund. The names of the saints invoked and the relative position which they occupy can be easily explained on the supposition that the book was written for this abbey.

In the first place, the name of St. Peter is invoked twice. This probably commemorates the Bull of Pope Alexander III. obtained by Abbot Hugo in 1172, by which the abbots of St. Edmund were exempted from promising canonical obedience to any bishop or archbishop, and were made subject to the direct authority of the Roman Pontiff.<sup>a</sup>

<sup>a</sup> "In suscipienda vero Benedictione Abbas vester nulli Archiepiscopo vel Episcopo, sed soli Romano Pontifici, ad cuius dispositionem idem Monasterium vestrum specialiter pertinet, obediens-

Farther on, the name of St. Edmund is brought into the greatest possible prominence by the position which he occupies in the list of martyrs, immediately after the proto-martyr St. Stephen, and before St. Lannus and all other martyrs. He is also invoked twice.

Many English names occur among the martyrs which follow, viz. Alban, Edward, Alphege, Thomas of Canterbury (erased), Kenelm, but these occur just as they might be found in any Calendar of the Southern Province.

Amongst the Confessors, St. Benedict is invoked twice, and he is followed by St. Maur. This of course only points to Benedictine Use, but farther on in the list of Confessors we have St. Botolph (invoked twice), followed by St. Jurnin. Both of these saints are closely connected with the abbey of St. Edmund. Their bodies had been translated to St. Edmund's, and, as we learn from the *Coste Sacre Historie* of the abbey,<sup>2</sup> their shrines had been enriched with plates of chased silver in the time of Abbot Baldwin (1065–1097), when the shrine of St. Edmund was also similarly adorned.

Very little is known of these two saints, Botolph and Jurnin, who were held in such high honour at St. Edmund's. The first of them seems to have been a bishop of East Anglia, and is not to be confounded with the well-known St. Botolph abbot. His translation was observed at Bury on February 15th as a feast of twelve lessons in two copes,<sup>3</sup> and his other festival was observed on June 17th, the same day as that of his namesake St. Botolph abbot.

St. Jurnin (who is sometimes called Firmin) is said to have been of the royal family of East Anglia, but no particulars of his life have reached us. His translation was observed at Bury on January 24 in two copes, and his other feast was similarly honoured on February 23.<sup>4</sup>

In addition to these saints the Litany contains the names of St. Edwold, brother of St. Edmund, who led the life of a hermit at Cerne, in Dorsetshire, and of St. Ivo, St. Felix, the apostle of East Anglia, St. Guthlac, and others more or less connected with the Eastern Counties.

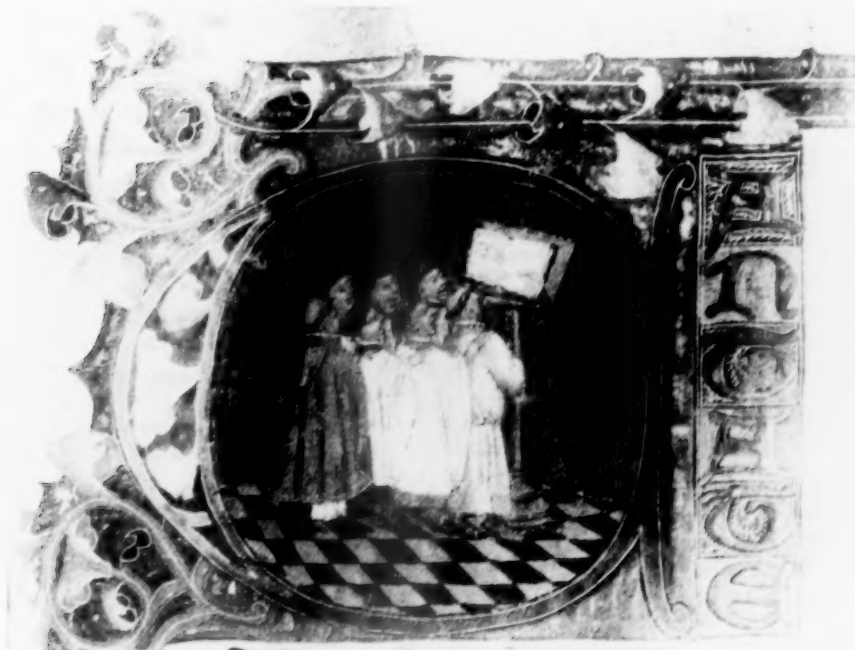
<sup>1</sup> "Incipit oratio in laudem Professorum." J. BATTIE, *Antiquitates S. Edmundi Buriensis*. Oxoniae, 1746, p. 72.

<sup>2</sup> *Memoriae de St. Edmund's Abbey*, edited by T. Arnold (Rolls Series), 1892, p. 289.

<sup>3</sup> "Festum sancti Botulphi episcopi et confessoris xii. lectiones et in ij. copis." MS. Calendar of Bury St. Edmund's (British Museum, Harl. MS. 2977, fo. 26).

<sup>4</sup> "Botulph evangelista in episcopi et botulph abbatis magnae sanctitatis viri." MS. Martyrologium (British Museum, Bay. MS., 2.A.xiii.).

<sup>5</sup> Harl. MS. 2977.







There is one name more in the Litany which deserves notice, because by itself it would be almost sufficient to connect the Psalter with St. Edmund's Abbey, viz. St. Saba, inserted in a later hand between St. Gregory and St. Nicholas. St. Saba, or Sabas, a great abbot of the Eastern Church, and the founder of many monasteries in Palestine (where the monastery of Mar Saba, between Jerusalem and the Dead Sea, still bears his name), had a church and monastery dedicated under his name at Rome. When Anselm, abbot of St. Saba at Rome, was promoted to the abbacy of St. Edmund, which office he held from 1121 to 1148, he founded an altar of St. Saba at St. Edmund's, which was dedicated by John Bishop of Rochester.<sup>a</sup> The name of St. Saba is found on December 5 in the MS. Ordinal of St. Edmund's Abbey:<sup>b</sup> "Sancti Sabe confessoris in albis xij lectiones."

Enough has been said to show that the Litany of this Psalter is connected with the Abbey of St. Edmund, and since writing the above my attention has been directed by Canon Cooke to an earlier Litany of the same house, preserved in the Vatican Library at Rome, which has been printed in part by Cardinal Mai in his *Nova Collectio*.<sup>c</sup> In this Litany, which is assigned to the tenth or eleventh century, a list of English saints is found very similar to that in the fifteenth-century Psalter before us, and in particular we find "Sce Eadmundē ij.", "Sce Botulfe ij.", "Sce Hiurmine ij.", by which entries our identification is confirmed.

Before leaving the Litany it may be noticed that the words *dompnum apostolicum* in the petition for all degrees in the Church have been very neatly erased. It was evidently desired to comply with the orders of Henry VIII. in such a way as to disfigure the book as little as possible.

*Placebo* and *Dirige* follow the Litany, and here the writing is changed to twenty-four lines to a column instead of twenty-two. The Use differs slightly

<sup>a</sup> Battely, *op. cit.* p. 69. The chapel of St. Saba was a spot closely connected with an important episode in the history of the abbey. In 1213 the seven electors, to whom was delegated the task of choosing an abbot by way of compromise (*via compromissi*), met in the chapel of St. Saba, and selected Hugo de Northwold, a choice which led to an eventful controversy between the Abbey and King John. (See *Memorials of St. Edmund's Abbey*, ed. by T. Arnold (Rolls Series), 1892, ii. 31.)

<sup>b</sup> Harl. MS. 2977.

<sup>c</sup> *Scriptorum Veterum Nova Collectio e Vaticanis Codicibus Edita ab Angelo Maio* (Romæ, 1831), v. 68. Cardinal Mai has only printed the English names which occur in the Litany. Of these eleven are not found in the later one, which is printed at the end of this paper, viz. Aethelbyrhte, Byrine, Eorconwolde, Oswolde [Ep. Conf.], Indoce, Grimbalde, Machu, Hyue, Eadburh, Aelfgyfu, Toua.

from Sarum, and is probably the Benedictine Use of Bury; and the Canticles for festivals follow the same Use.

The Hymnarium, which fills more than thirty leaves of the MS., is of considerable interest. A large number of the hymns are not of Sarum Use, but they are found in the Durham books and other English Benedictine books. Many of them have been printed in the *Anglo-Saxon Hymnarium* issued by the Surtees Society. About half a dozen have not been found in other English books, but by the kind help of Canon Cooke they have all been found in Continental books with one or two exceptions.

Taken as a whole the Hymnarium is interesting, because it evidently gives us the Use of St. Edmund's. Individually the hymns are mostly found elsewhere, but as a group the arrangement is probably peculiar to Bury.

The short hymn for the translation of St. Edmund, which begins: *O mundi pater unice*,<sup>a</sup> may perhaps be peculiar to St. Edmund's; and the hymn for even-song of St. Anne, beginning *O mater preclarissima*, has not yet been identified as occurring elsewhere.

The hymns throughout have musical notation. I am not qualified to say anything on this subject, but I have been informed by the Rev. W. H. Frere and Mr. W. J. Birkbeck that the music often differs much from that of the Sarum books, and is of considerable interest.

In conclusion, I must express my thanks to Canon Cooke<sup>b</sup> for having given me the opportunity of studying this MS., and also for the great help and encouragement which he has given me in the preparation of these notes.

<sup>a</sup> *O mundi pater unice  
cunctarum rerum optime  
sanctum edmundum annue  
nobis pie recollere.*

*Edmunde pater paterne  
tuos fideles respice  
et nos paterno animo  
defende a periculo.*

*Laus tibi summe domine  
pro cuius sacro nomine  
edmundus mortem sustulit  
et mortis uictor extitit.*

<sup>b</sup> I may be allowed to record with deep regret the death of Canon Cooke on November 23, 1894.

APPENDIX.

LITANY OF THE ST. EDMUND'S PSALTER.

Kyrieleyson. fo. 123.  
Christeleyson.  
Christe audi nos ij.  
Pater de celis deus miserere nobis.  
Fili redemptor mundi deus miserere nobis.  
Spiritus sancte deus miserere nobis.  
Sancta trinitas unus deus miserere nobis.  
Sancta maria. ora.  
Sancta dei genetrix. ora.  
Sancta uirgo uirginum.  
Sancte Michael. ora.  
Sancte Gabriel. ora.  
Sancte Raphael. [ora.]  
Omnes sancti angeli et archangeli orate pro nobis.  
Omnes sancti beatorum spirituum ordines orate.  
Sancte Johannes baptista. ora.  
Omnes sancti patriarche et prophete orate pro nobis.  
Sancte Petre. ij. ora.  
Sancte Paule. ora.  
Sancte Andrea. ora.  
Sancte Johannes. ora.  
Sancte Jacobe. ora.  
Sancte Philippe. ora.  
Sancte Bartholomee. ora.  
Sancte Mathee. ora.  
Sancte Thoma. ora.  
Sancte Jacobe. ora.  
Sancte Symon. ora.  
Sancte Tadee. ora.  
Sancte Mathia. ora.  
Sancte Barnaba. ora.

Sancte luca. ora.  
 Sancte marce. ora.  
 Omnes sancti apostoli et ewangeliste. orate pro nobis.  
 Omnes sancti discipuli domini. orate pro nobis.  
 Omnes sancti innocentes. orate pro nobis.  
 Sancte Stephane. ora.  
 Sancte Edmunde. ij. ora.  
 Sancte line. ora.  
 Sancte Clete. ora.  
 Sancte Clemens. ora.  
 Sancte Alexander. ora.  
 Sancte Sixte. ora.  
 Sancte Corneli. ora.  
 Sancte Cypriae. ora.  
 Sancte Laurenti. ora.  
 Sancte Vincenti. ora.  
 Sancte Tyburti. ora.  
 Sancte Dionisi cum sociis tuis. ora pro nobis.  
 Sancte Maurici cum sociis tuis. ora pro nobis.  
 Sancte Nigasi cum sociis tuis. ora pro nobis.  
 Sancte Eustaci cum sociis tuis.  
 Sancte ypolite cum sociis tuis. ora  
 Sancte Georgi. ora.  
 Sancte Pancraci. ora.  
 Sancte Albane. ora.  
 Sancte Oswalde. ora.  
 Sancte Edwarde. ora.  
 Sancte Alphege. ora.  
 Sancte Thoma [erased]. ora.  
 Sancte Kenelme. ora  
 Sancte flabiane. ora.  
 Sancte Sebastiane. ora.  
 Sancte Geruasi. ora.  
 Sancte Prothasi. ora.  
 Sancte christophore. ora.  
 Sancte Grisogone. ora.  
 Sancte Ignaci. ora.  
 Sancte Marcelline et Petre. orate pro nobis.  
 Sancte Johannes et Paule. [orate pro nobis.]  
 Sancte Cosma et Damiane. orate pro nobis.  
 Omnes sancti martyres. orate pro nobis.

Sancte Silvester. ora.  
Sancte Marcialis. ora.  
Sancte Hillari. ora.  
Sancte Jeronime. ora.  
Sancte Martine. ora.  
Sancte Ambrosi. ora.  
Sancte Augustine. ora.  
Sancte Benedicte. ij. ora.  
Sancte Maure. ora.  
Sancte Gregori. ora.  
saba. ora. [inserted by a later hand between the lines.]  
Sancte Nicholae. ora.  
Sancte Egidi. ora.  
Sancte Augustine cum sociis suis. ora.  
Sancte Dunstane. ora.  
Sancte Edmund. ora.  
Sancte Swythune. ora.  
Sancte Ethelwolde. ora.  
Sancte Cuthberte. ora.  
Sancte Pauline. ora.  
Sancte Bothulphe. ora. ij.  
Sancte Jurmine. ora.  
Sancte Edwolde. ora.  
Sancte Edward. ora.  
Sancte Wlstane. ora.  
Sancte Iuo. ora.  
Sancte felix. ora.  
Sancte Gutlace. ora.  
Sancte leonarde. ora.  
Sancte Alexi. ora.  
Omnes sancti confessores. orate pro nobis.  
Omnes sancti monachi et heremite. orate pro nobis.  
Sancta anna. ora.  
Sancta maria magdalena. ora pro nobis.  
Sancta felicitas. ora.  
Sancta Perpetua. ora.  
Sancta Agatha. ora.  
Sancta Agnes. ora.  
Sancta Cecilia. ora.  
Sancta lucia. ora.  
Sancta anastasia. ora.



- Sancta Eufemia. ora.  
 Sancta christina. ora.  
 Sancta Margareta. ora.  
 Sancta Petronilla. ora.  
 Sancta Scolastica. ora.  
 Sancta ffidis (*sic*). ora.  
 Sancta Genouefa. ora.  
 Sancta Brigida. ora.  
 Sancta Katerina. ora.  
 Sancta Helena. ora.  
 Sancta Etheldreda. ora.  
 Sancta Mildritha. ora.  
 Sancta Ogitha.<sup>a</sup> ora.  
 Sancta Editha. ora.  
 Sancta Ethelburga. ora.  
 Sancta Sexburga. ora.  
 Sancta Whitburga. ora.  
 Sancta Ermenilda. ora.  
 Omnes sancte uirgines. [orate pro nobis.]  
 ij. Omnes sancti orate pro nobis.  
 Propicius esto parce nobis domine.  
 Propicius esto libera nos domine, &c.

#### NOTE.

The petitions in the Litany are the same as those in the Litany of a Westminster Psalter in the British Museum.<sup>b</sup> This Litany will be printed in the third volume of *Missale ad usum Ecclesie Westmonasteriensis*, now being edited by Dr. J. Wickham Legg, F.S.A., for the Henry Bradshaw Society.

<sup>a</sup> = Ositha.

<sup>b</sup> Reg. MS. 2. A. xxi. fo. 182b.

XXI.—On a MS. Pontifical of a Bishop of Metz of the Fourteenth Century.  
By the REV. E. S. DEWICK, M.A., F.S.A.

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Read January 25, 1894.

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By the courtesy of our Fellow Thomas Brooke, Esq. a MS. Pontifical is exhibited, with pictured subjects of great beauty and in a splendid state of preservation. It has been briefly described in the Catalogue of the Brooke Library under the title *Pontificale Romanum*,<sup>a</sup> and is there set down as the work of an English scribe, and assigned to the thirteenth century, but it will be presently seen that this description needs revision.

The book consists of 140 leaves of vellum, which measure  $12\frac{1}{2}$  by  $9\frac{3}{4}$  inches, and it has forty-two large miniatures illustrating various ceremonies in which a bishop might be called upon to take part. Of these miniatures twenty-nine are finished, whilst thirteen of them remain unfinished, the last seven not having been advanced beyond the stage of outline.

In addition to the large miniatures there are many historiated initial letters, and a profusion of grotesques and of subjects drawn from scenes of contemporary life at the foot of almost every page.

But before entering into the subject of the contents of the book and of its pictures, it is desirable to trace its history as far as possible. At the outset of this inquiry we are confronted by the difficulty which often occurs in the case of Pontificals, viz. that an attempt has been made to obliterate the marks of personal ownership. A Pontifical was generally the private property of a bishop, and at his death it was sometimes bequeathed to a church,<sup>b</sup> but more often left to the

<sup>a</sup> *Catalogue of the Manuscripts and Printed Books collected by Thomas Brooke, F.S.A.* (London, 1891), ii. 523.

<sup>b</sup> For example, Roger de Mortival, Bishop of Salisbury (1315—1330), bequeathed a Pontifical to the cathedral church of Salisbury, as shown by an inscription in the book, which is now in the Bodleian Library (Rawlinson, C. 400).

disposal of his executors, and in order to adapt it to the use of some other bishop erasures and alterations were made.

In this particular book, the numerous shields of arms on the first page and throughout the book have been carefully scraped, and painted over with masses of blue or red paint. Also in the office for the consecration of a bishop, the name of the see of the bishop elect who makes profession of canonical obedience has been erased, together with that of the metropolitan to whom the profession is made, and in each case the words *talis ecclesie* have been filled in over the erasure as if to make the book fit for the use of any bishop to whom it might be sold.

At the first inspection of the MS. it seemed as if all traces of its original ownership and locality had been removed, but fortunately in the office for the benediction of an abbot, and again in the corresponding form for that of an abbess, the question asked by the bishop of the abbot or abbess elect has been allowed to stand as follows: *Vis metensi ecclesie et mihi, meisque successoribus subiectionem et obedientiam exhibere, secundum canonicam auctoritatem et decreta sanctorum pontificum?* (fo. 64b and 84).

From this passage we gather that the MS. was written for a bishop of Metz, one of the suffragans of the province of Trier.

This attribution of the book to Metz is confirmed by the short litany on fo. 12, in which four saints of each class are invoked, viz. four apostles, four martyrs, four confessors, and four virgins, with the addition of St. Mary Magdalene. The first two classes do not yield any evidence, the apostles being SS. Peter, Paul, Andrew, and John the Evangelist; and the martyrs being SS. Stephen, Laurence, Vincent, and George. St. Stephen is the patron saint of the cathedral church of Metz, but as protomartyr he would head the deacons in any litany. The confessors are SS. Silvester, Clement, Martin, and Benedict. Here St. Clement must not be confused with the martyr Pope of that name, but may be safely identified with St. Clement, first bishop of Metz,<sup>a</sup> whose name would not be entitled to special prominence except in Metz. The virgins again are neutral witnesses, being SS. Agatha, Lucy, Agnes, Katherine.

When we inquire further as to the particular bishop for whom the book was written, we are met by the want of armorial bearings which should decide the question definitely. In some cases, however (*e.g.* on fo. 43b), it is just possible to

<sup>a</sup> Gams, *Series Episcoporum*, Ratisbonæ, 1873, p. 292. The festival of "Clemens Episcopus Metensis" was observed at Metz as a festival of nine lessons, on November 23, the same day as Clemens P.M. elsewhere, and his Translation on May 2.

see the two fishes placed back to back which distinguish the arms of the counts and dukes of Bar.<sup>a</sup> These two fishes occur also in the ornamental fillings up of the capital letter M on fo. 8 b, and often singly; and in such cases they have been left without erasure, being regarded as mere decoration. On turning to the list of the bishops of Metz, we find that Reinhold von Bar held the see from 1302 to 1316,<sup>b</sup> and as this date agrees well with the workmanship of the book, we may venture to assume that the book was originally written for this prelate.

Another shield of arms which occurs frequently (fo. 4 b, etc.) in the book has three silver pales on a red (?) field, with a chief of gold. (*Gules, three pales argent, a chief or*).

Possibly more convincing evidence as to the ownership of the book might be obtained by cleaning off the paint which has been applied to obliterate the coats of arms, and in the meantime it is not needful to say more than a few words about the bishop to whom it is provisionally assigned.

Reinhold von Bar was the son of Theobald II., Count of Bar, and when his brother, Henry III., started for the East to take part in the Crusade, he was appointed one of the Regents of Bar, and took an active part in managing its temporal affairs. He died in 1316, it was suspected of poison, when planning an attack upon the Duke of Lorraine. When his tomb was opened in 1521, his body was found clad in rich vestments, and his mitre is noticed as having Moses and Aaron embroidered upon it.<sup>c</sup>

Although the book was written for a prelate owing allegiance to the Holy Roman Empire, the workmanship is throughout of a thoroughly French character, and must be assigned to the early part of the fourteenth century, even if the attribution of it to Reinhold von Bar is considered as not proved. In the borders the stiff conventional ornament of the thirteenth century has partly budded out into natural branches with leaves resembling those of ivy, which are characteristic of the fourteenth century, but in some respects the fashions of the thirteenth century survive. The knights in armour are still clad in chain mail; there is not a trace of plate armour. The architecture, too, might be assigned to the end of the thirteenth or the very commencement of the fourteenth century. The church, which is represented many times in the pictures illustrating the dedication of a church, is a building of fully developed Geometrical Decorated, and is

<sup>a</sup> *Bar (comtes et ducs de)*. D'azur, semé de croix recroisettées au pied fiché d'or, à deux bars adossés du même, brochant sur le tout. (Rietstap, *Armorial Général*, Gouda, 1884, Tome, I, p. 110.)

<sup>b</sup> Gams, *Series Episcoporum*, Ratisbonæ, 1873, p. 293. Grote, *Stammtafeln*, Leipzig, 1877, p. 334.

<sup>c</sup> Calmet, *Histoire Ecclésiastique et Civile de Lorraine*, Nancy, 1728, p. 480.

remarkable for a lofty clerestory, which occupies about one-half of the total height of the building. Those who have visited the cathedral church of Metz will remember that the existing clerestory is of immense size, about equal in height to the nave arcade and triforium together. The double range of flying buttresses, which characterise the present building, is also well shown by the artist of the Pontifical, and we may fairly regard the pictures as giving a conventional representation of the cathedral church of Metz, the nave of which was completed in 1332.<sup>a</sup>

We may now proceed to describe the contents of this Pontifical, which does not contain the whole of the services in which a bishop might be required to officiate.

The first office is that for the dedication of a church, which occupies sixty-two leaves and has nineteen large pictures, besides many historiated initials. Then follow the forms for the blessing of an abbot of monks and an abbot of canons, with corresponding forms for abbesses. Then comes the *ordo* for holding a synod; and the book ends with the form for consecrating a bishop, which fills thirty-seven leaves and has twelve large unfinished pictures. There are no offices for confirmation, nor for conferring sacred orders, nor for the numerous benedictions which a bishop might be called upon to perform. The original owner of this Pontifical was, perhaps, too great a man to concern himself about these smaller matters, which he may have delegated to a suffragan, or else he may have had another book more suited to the requirements of rough every-day use.

But before giving more precise details of the book before us, a few words may be said about other Pontificals of bishops of Metz. One of the earliest forms for the dedication of a church happens to be contained in the sacramentary of Drogon, bishop of Metz (826-855),<sup>b</sup> which is now in the National Library of Paris. The form in this sacramentary differs much in detail from that in the Pontifical before us.<sup>c</sup>

There is also in the National Library at Paris<sup>d</sup> a much later Pontifical of a bishop of Metz, which has been kindly examined for me by Dr. J. Wickham Legg. He reports that it is a plain book, in red and black, of the fifteenth

<sup>a</sup> Murray's *Handbook for France*, 1873, p. 668.

<sup>b</sup> Delisle, *Mémoire sur d'Anciens Sacramentaires*, Paris, 1886, p. 100.

<sup>c</sup> MS. Latin, 9428. The office is printed in the Appendix to Duchesne's *Origines du Culte Chrétien*, Paris, 1889.

<sup>d</sup> MS. Latin, 1233. It was formerly in the Colbertine Library, No. 4496, and is referred to by Martene in *De Antiquis Ecclesiae Ritibus*, Venetiis, 1783, i. p. xxi.

century, without pictures of any kind. In the matter of services it is more complete than Mr. Brooke's Pontifical, for it includes *Reconciliatio ecclesie*, *Benedictio altaris portatilis*, *Ordo de sacris ordinibus*, *Consecratio regis*, etc. In the *Ordinatio Abbatis* there is the question, *Vis metensi ecclesie et mihi meisque successoribus*, &c.? as in the Pontifical before us, and in the office for the consecration of bishops there is the question asked by the metropolitan of the bishop elect, *Vis treverensi ecclesie mihi et successoribus meis*, &c.? which gives the words which have probably been erased on fo. 107 b. of Mr. Brooke's Pontifical. Of the details of the services in the Paris book I have no information. No other Pontifical which can be assigned to a bishop of Metz is known to us; and the description of the Brooke Pontifical may now be proceeded with.

The offices contained in this Pontifical appear to have on them very few marks of the local and personal influence which some bishops impressed on their Pontificals. Indeed, they are mostly taken, with little variation, from the *Ordo Romanus*. The service for the dedication of a church is almost identical with the *Ordo ad benedicendam Ecclesiam* printed by Hittorpius.<sup>a</sup> The prayers, benedictions, anthems, and responds are nearly all the same. The rubrics have some variations, and those in this Metz Pontifical generally give fuller and more precise rules than those in the *Ordo Romanus*. The long litany of the latter has also been curtailed, as already noticed. The Metz Pontifical omits the form for the blessing of the vessels to be used in the service of the church, but gives the full text of the mass *Terribilis*, for which in the *Ordo Romanus* reference is made to the sacramentary.

The other offices in the MS. are also found to be very closely allied to those in the *Ordo Romanus*; and we may, therefore, confine our description of the book mainly to the pictures, merely pointing out from time to time some peculiarities in the rubrics which deserve notice. Of the *Ordo Romanus* itself, it may be sufficient here to remark that it can be traced back to the eighth century, and that it may be connected with Charles the Great's introduction of Roman ritual into his dominions.<sup>b</sup> At the beginning of the ninth century, Amalarius of Metz wrote a commentary on parts of the *Ordo*,<sup>c</sup> and this treatise may have had some effect in inducing a bishop of Metz to follow the *Ordo Romanus* in the fourteenth century.

<sup>a</sup> Melchior Hittorpius, *De Divinis Catholicæ Ecclesiæ Officiis*, Parisiis, 1624, p. 119.

<sup>b</sup> Cf. Duchesne's *Origines du Culte Chrétien*, Paris, 1889, p. 143.

<sup>c</sup> This is printed in Hittorpius, *De Div. Cath. Eccl. Officiis*, Parisiis, 1624, p. 306; and also by Mabillon, *Museum Italicum*, vol. ii. See also Smith and Cheetham's *Dictionary of Christian Antiquities*, Art. *Ordo*.



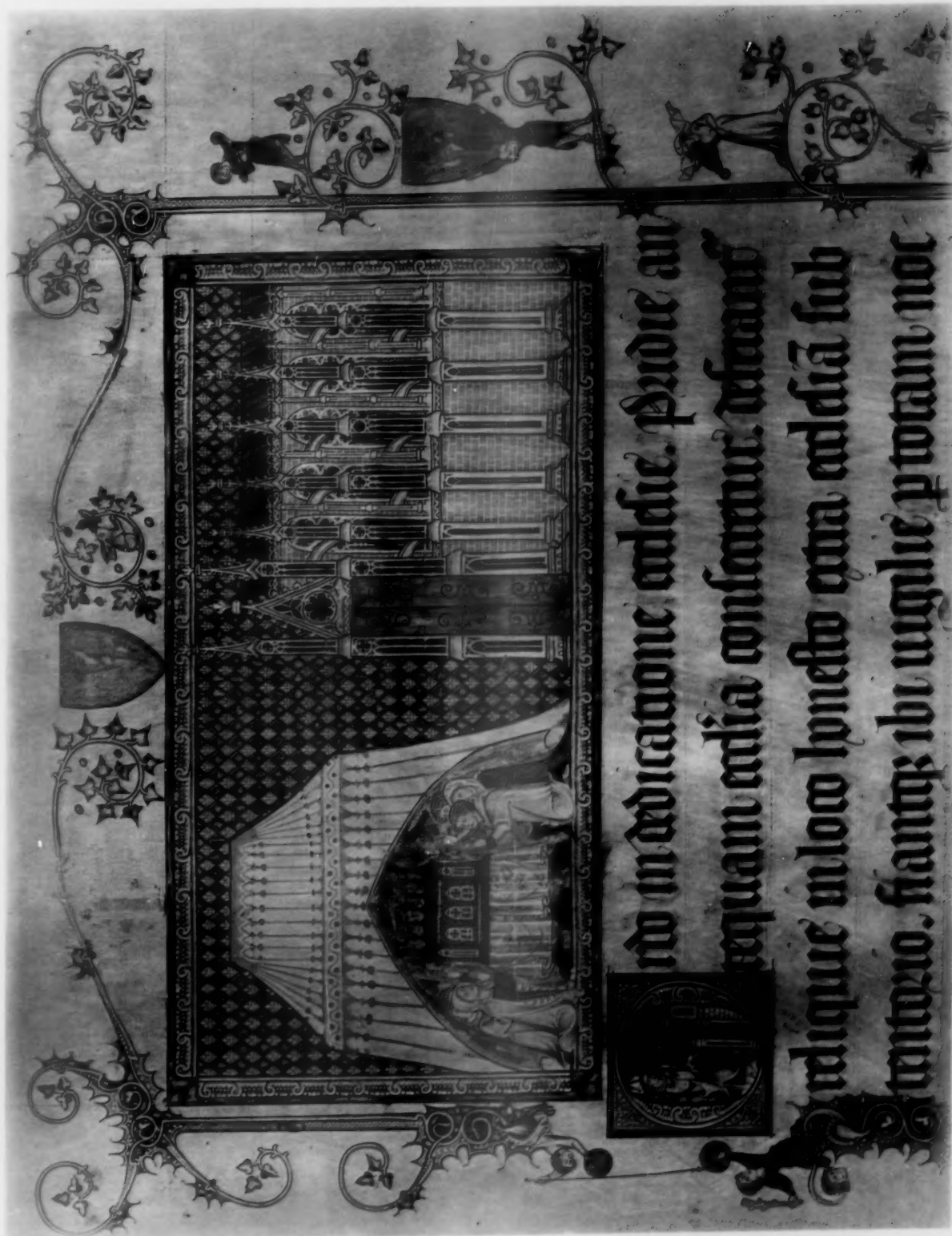
The first office in the Brooke Pontifical is that for the dedication of a church, and the picture with which the book opens (Plate XXXI.) shows the inside of the temporary pavilion or tent, in which, on the night which preceded the dedication, watch was kept before the relics which were to be enclosed in the altar of the church to be dedicated.<sup>a</sup> Lay-folk, both men and women, are seen kneeling around a richly decorated gilt reliquary, which is in the form of a chapel with three windows in its side and elaborate roof-crestring. By the convenient licence of mediæval perspective both gable-ends are seen at the same time.

The actual ceremony of the dedication commences with the arrival of the bishop and clergy at the tent in which the relics have been placed, and where watch has been kept during the previous night. The rubrics of the Pontifical are fuller than those of the *Ordo Romanus*. The bishop is ordered to be vested in albe, stole, silken cope, and *mitra pluvialis* and to have his crosier; but to be without fanon, sandals, and gloves. A litany<sup>b</sup> is then said, and at a certain point in it the bishop is to rise and make the sign of the cross toward the church to be dedicated, saying three times, *Ut ecclesiam istam benedicere et conseruare digneris*. The picture on fo. 2 illustrates this scene. The acolyte who holds the book before the bishop is raised on a stool in order that he may bring the book nearer to the eyes of the bishop.

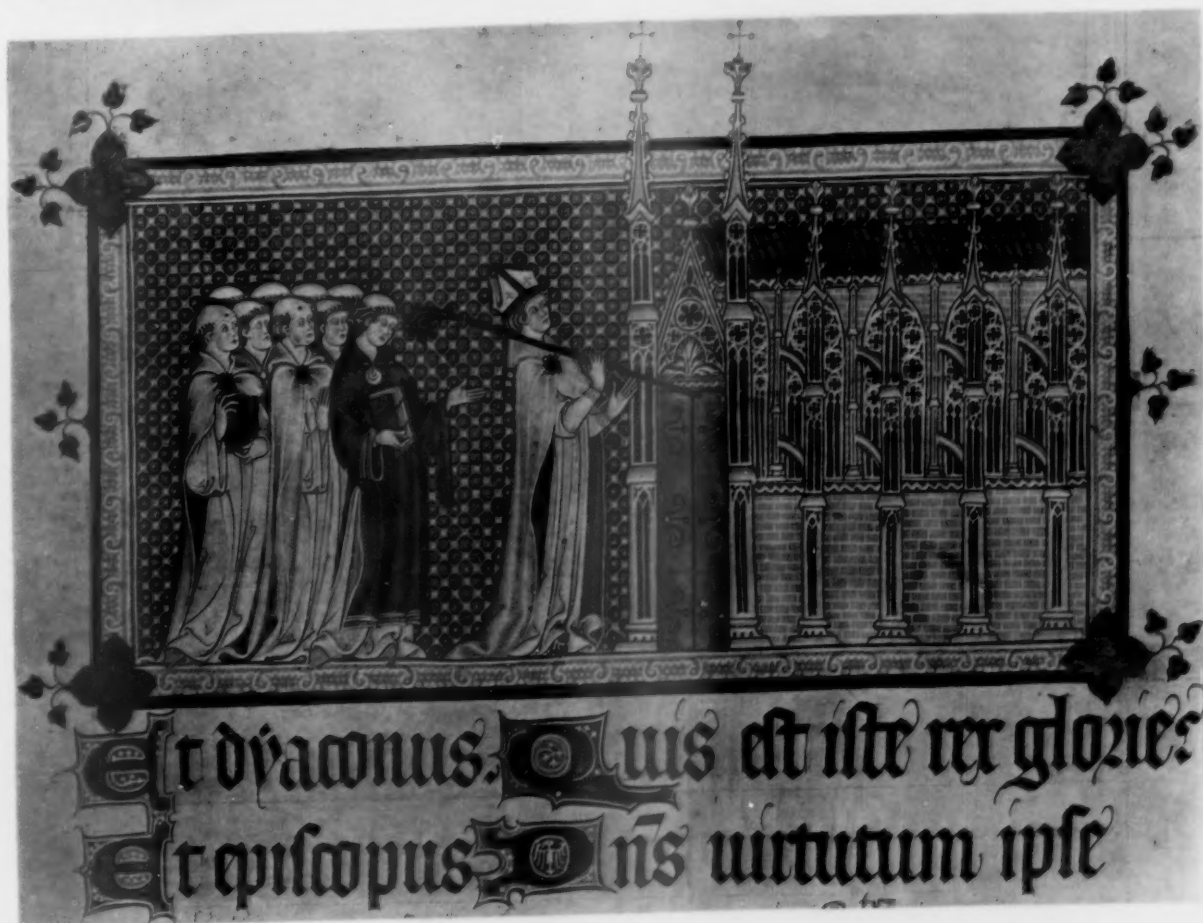
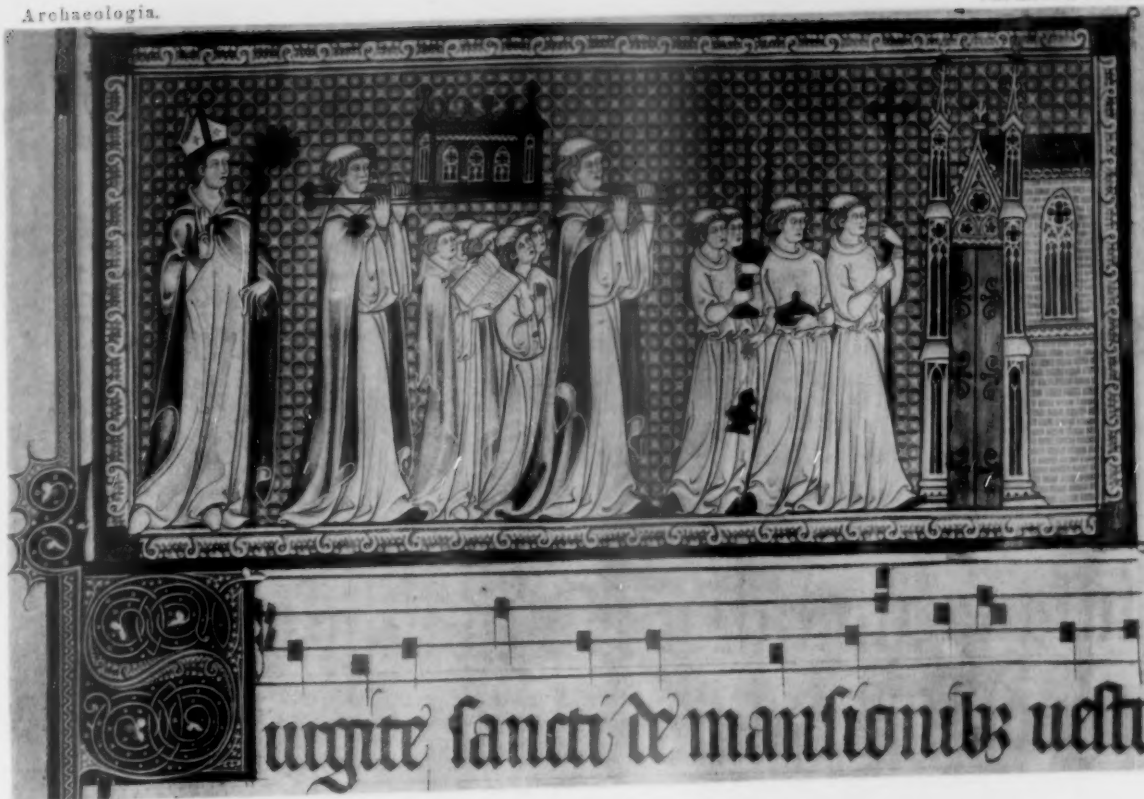
When the litany is concluded, the exorcism and blessing of water and salt take place, and the relics are removed from the tent. Then a procession is formed, the relics are carried on the shoulders of two clerks vested in copes,

<sup>a</sup> It may be remarked that the night vigil before the relics, and the subsequent enclosing of them in the altar of the church, are prominent features in the Roman and in most Continental Pontificals. In many English Pontificals, however, there is no mention of the enclosing of the relics of saints in the sepulchre of the altar. When the enclosing of relics is noticed it is said to be done in the Roman manner (*more Romano*), when no relics are enclosed the dedication is performed after the English custom (*more Anglicano*). This is very clearly set forth in a MS. Pontifical in the British Museum (Lansdowne, 451, circa 1400), written for a bishop of London, in which the Roman Use is given as an alternative to the English, but it is added that Roman manner of enclosing relics was seldom used in those days, on account of the scarcity of old relics, and the fact that the canonisation of new saints was a rare event. ("Sciendum est tamen quod variis modis recluduntur reliquie infra altare licet istis temporibus hoc raro fiat propter reliquiarum antiquarum paucitatem et novorum sanctorum rarum canonizacionem." Lansdowne MS. 451, fo. 136 b.) Another difference between the Roman and English mode of dedicating churches is that in the former twelve crosses are painted on the inside walls of the church only, whilst in the latter twelve crosses are painted on the outside as well as on the inside.

<sup>b</sup> This is printed at length in Hittorp's *Ordo Romanus*, p. 120, but is not given in full in the Pontifical.









preceded by cross-bearer, thurifer, and light-bearers, followed by the bishop and accompanied by the choir singing, *Surgite sancti de mansionibus vestris*. This procession is seen on fo. 5 b (Plate XXXII., fig. 1).

After an anthem and a prayer, the door of the church is reached, and the bishop knocks three times at the door of the church and is answered by the deacon within. In the intervals between the knockings the procession with relics makes the circuit of the church, and at the first round the bishop sprinkles the lower part of the walls, at the second the middle part, and at the third the upper part (*circa tectum*). This part of the service is nearly the same as in the modern Roman Pontifical, except that some of the responds and versicles are different, but they are almost identical with those in the *Ordo Romanus*. On fo. 7 and fo. 8 are pictures of the bishop sprinkling the lower part and the middle part of the walls. These two are almost alike, and on fo. 7 b and fo. 11 (Plate XXXII., fig. 2) the bishop is seen knocking at the door and saying, *Tollite portas*, etc. whilst the deacon, who should be inside the church to answer, *Quis est iste rex glorie?* is represented in red dalmatic standing immediately behind the bishop, and in the attitude of speaking.

When the door of the church has been opened, the bishop enters accompanied by a few clerks, whilst the others remain outside with the relics, and the door of the church is closed. Then again is said a short litany, which has been already referred to as containing the name of St. Clement, first bishop of Metz, among the four Confessors invoked. The next picture (fo. 11 b) shows the bishop kneeling at a faldstool, covered with a fringed cloth of rich design. His clergy kneel behind him, and the altar is already vested with a white cloth hanging in rich folds and adorned with an image of Our Lady with her Divine Child and two lighted candles. The vesting of the altar at this point of the ceremony is probably due to the artist's anticipation.

The next picture on fo. 14 (Plate XXXIII.) shows the bishop in the act of performing the well-known ceremony of writing the Greek and Latin alphabets with his crosier on two lines of ashes sprinkled on the floor of the church, and connecting diagonally the four corners. The Greek alphabet,<sup>a</sup> which is placed below the picture, includes some letters of rather singular form. The twenty-four letters of the Greek alphabet which are generally used, are here augmented by three

<sup>a</sup> In writing the Greek Alphabet the Metz rubric orders the bishop to commence *de dextro angulo ab oriente*. The *Ordo Romanus*, on the contrary, says *de sinistro angulo*. Perhaps the same corner is meant in both places. The rubric of the Roman Pontifical makes the matter clear by saying *ab angulo Ecclesie ad sinistram intrantis*.



characters which had fallen out of use as letters, but were retained for service as numerical signs. These are the sixth letter, an altered form of the Digamma, which here takes the form of S, and designates 6, Koppa, used for 90, and the last, Sampi, which represents 900. On the other hand Rho and Sigma seem to have been accidentally omitted, so that the number of letters is here only twenty-five, instead of twenty-seven which is found in French Pontificals, such as that of Noyon, of which a facsimile is given by Martene.<sup>a</sup>

The next ceremony in the Pontifical is the blessing of Gregorian water, of which there are many illustrations in the initial letters; but we have no more large pictures till we come to the consecration of the altar. On fo. 23 b the bishop is seen standing by the altar making a cross on it, with his thumb dipped in holy water. Both the solid base of the altar and the *mensa* appear to be of green marble, but in subsequent pictures the latter is white. The front of the altar is panelled. On fo. 29 the service for the separate consecration of an altar commences, and the picture on fo. 29 b shows the bishop in the act of blessing the altar. On fo. 30 the picture is very similar to the last but one, and on fo. 31 b (Plate XXXIV., fig. 1) the bishop is seen anointing the altar with oil, while a clerk in cope with chrismatory stands behind him; and the same subject is repeated on fo. 32 b.

At this point, between fo. 32 and fo. 33 (as now numbered), there is unfortunately a leaf missing, and the *Ordo Romanus* shows that the missing matter must have consisted of the anointing of twelve crosses on the walls (three on the east, three on the south, three on the west, and three on the north). The leaf was probably stolen from the book for the sake of the beauty or interest of the picture illustrating this subject.

There is yet another leaf missing between fo. 33 and fo. 34, but in this case the subject-matter which must have occupied the missing leaf does not suggest any special reason for its abstraction. The two leaves just referred to are the only ones which are wanting. The first of them may possibly be still in existence in some scrap-book, to which it may have been consigned by a rapacious collector.

The altar having been now prepared for the reception of the relics to be enclosed in it, the relics are brought in solemn procession to the church; and at fo. 41 b we have a procession very similar to that at the commencement of the dedication, when the relics were carried three times round the church.

On fo. 43 b (Plate XXXII., fig. 2) the bishop is seen in the act of hallowing the

<sup>a</sup> *De Antiquis Ecclesiae Ritibus*, Venetiis, 1783, ii. 261.

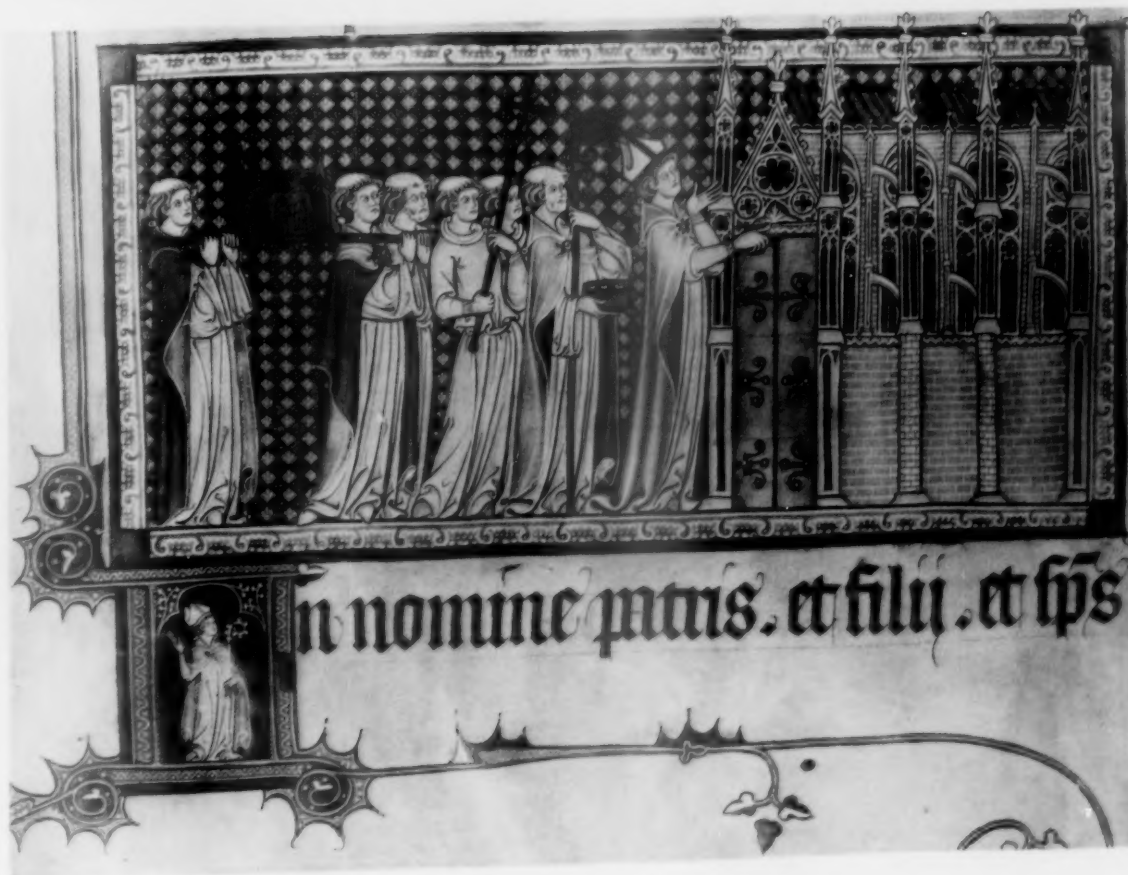




1.



2.



BROOKE PONTIFICAL.— { 1. BISHOP ANOINTING THE ALTAR (fo. 316).  
2. BISHOP HALLOWING THE CHURCH DOOR (fo. 436).



door through which the sacred relics are to enter the church; and after the *confessio* or sepulchre has been duly prepared by unction with cream for the reception of the relics, they are placed in the sepulchre, as is well shown on fo. 46 b (Plate XXXV., fig. 1). The sepulchre is near the top of the front of the altar, and at its extreme right. A document with the bishop's seal upon it is enclosed at the same time, as shown in the picture and described in the rubric.<sup>a</sup>

In the picture which immediately follows, fo. 47 b, the sepulchre is closed with a slab of the same green stone of which the solid base of the altar is constructed, and the bishop is in the act of anointing it.

In the last picture connected with the dedication, the bishop having completed the ceremony, comes out of the vestry richly vested, and prepares to celebrate the mass *Terribilis* (fo. 50, Plate XXXV., fig. 2). The principal point to be noticed here is that the bishop wears the unusual ornament known as the *super-humerales*. This consists of two circular disks of gold or gilt metal on each shoulder, connected across the breast by an ornamental band. There is an ornament of this kind in the treasury at Paderborn, which is figured in Bock.<sup>b</sup> It was also worn by the bishops of Regensburg and the bishops of Liège, and it appears on the effigy of St. Lambert on the coins of the latter. It is also well seen on thalers of the bishops of Eichstädt, on which the effigy of St. Willibald is so adorned. I am not aware that it occurs on the coins of any bishop of Metz, but it is sometimes seen on the effigies of St. Adolph and St. Arnulph, early bishops of that see.<sup>c</sup>

Of the offices which next follow, it is not necessary to say more than a few words. The benediction of an abbot of monks is illustrated by five pictures. In the first (fo. 63) the bishop is seated on a faldstool, and the abbot elect is kneeling before him. The monks behind wear the Benedictine dress. In the second (fo. 66) the bishop, clergy, and abbot elect are kneeling at the litany. On fo. 70b the bishop is laying his hands on the head of the abbot, and the two remaining pictures (on fo. 72b and fo. 73) show the bishop in the act of giving to the abbot the rule of his order and the crosier.

In the office alternative words have been added above the line to enable it to be used for blessing more than one abbot at a time. It was also originally written for an abbot observing the rule of St. Benedict, but an alternative form has been added for one following the rule of St. Augustine.

<sup>a</sup> *Deinde ponat intra in confessionem tres partes de incenso cum litteris sigillo episcopi sigillatis; et tunc recludantur reliquie in confessionem* (fo. 46).

<sup>b</sup> Franz Bock, *Geschichte der liturgischen Gewänder des Mittelalters*, Bonn, 1859, i. 373, Taf. v.

<sup>c</sup> Cahier, *Caractéristiques des Saints*, Paris, 1867, i. 375.



In the next office for the benediction of an abbot of canons, the single picture on fo. 79 is nearly the same as at the beginning of the benediction of an abbot of monks, but the dress is changed from the black Benedictine habits of the monks to one consisting of surplices with black choir copes.

Three pictures (on ff. 82b, 89, 90 b) illustrate the benediction of an abbess of nuns, and these are almost similar to the corresponding pictures for the benediction of an abbot. It may be noticed that the abbess and the abbot of canons have silver crosiers, whilst the abbot of monks has a gilt crosier.

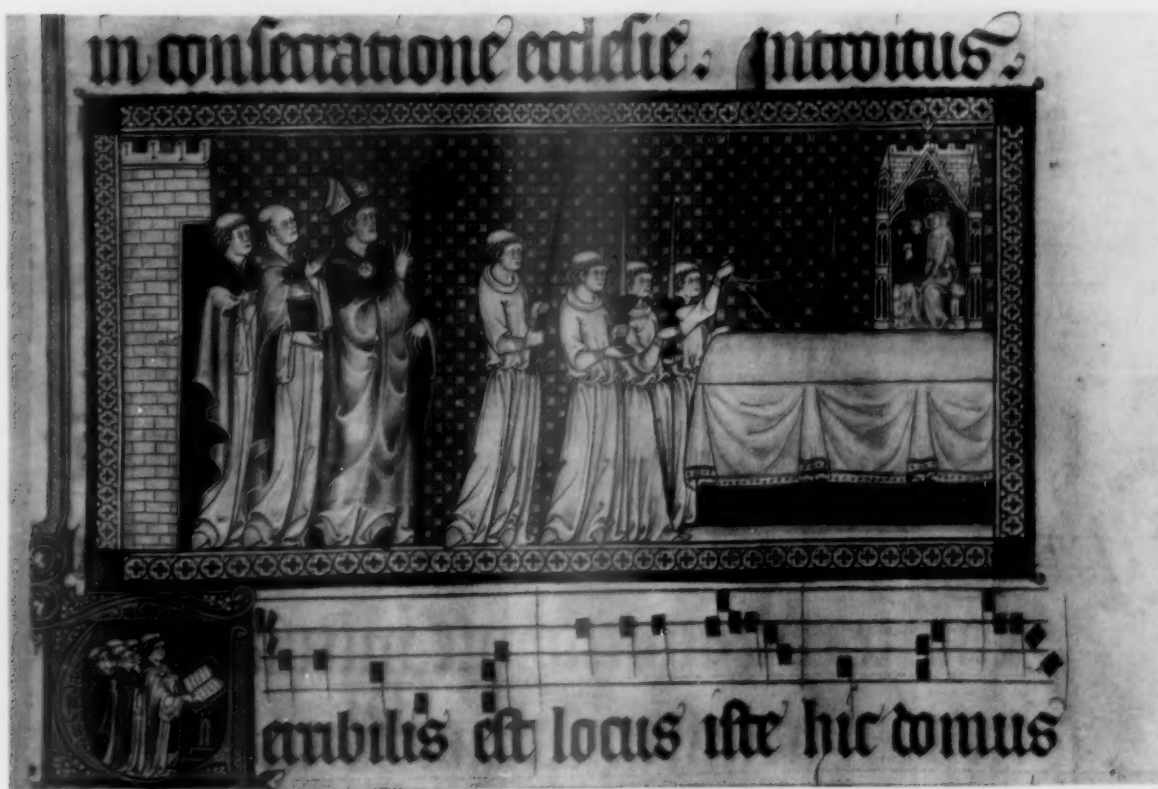
The abbess of canonesses is shown on fo. 92b, where the dress consists of a white tunic and mantle with a black veil. (Plate XXXVI., fig. 1).

The order for the holding of a synod which commences on fo. 98 has an unfinished picture at the beginning, which has been spoilt by the daubing in of the colours by a clumsy hand. Fortunately this is the only picture in the book which has been tampered with in this manner. This office differs considerably from that in *Ordo Romanus*, but the differences need not here be described.

The order for the consecration of a bishop is the last contained in this MS., and it closely follows the lines of that printed by Hittorpius,<sup>a</sup> which is described as being *secundum Gallorum institutiones*. The principal differences are as follows. The Metz Pontifical contains a preliminary inquiry as to the fitness of the bishop to be consecrated, followed by two collects. Then comes the usual address beginning, *Antiqua Sanctorum Patrum institutio*, and the examination of the bishop himself. The profession of canonical obedience is made immediately before the introit of the mass. During the singing of the offertory the newly-consecrated bishop offers to his metropolitan two large loaves, two flasks of wine, and two great candles. There is no mention of this ceremony in the older *Ordo*, but it is found in the modern Roman Pontifical, according to which it takes place after the offertory has been sung. Again, the Metz Pontifical has a form for the blessing and giving of the mitre which is not found at all in the older *Ordo*. This takes place, not before the gospel, when the ring and crosier are given, but immediately after the bishop has been communicated in both kinds by his metropolitan, and before the singing of the *Communio*. The episcopal benedictions which are given in this Pontifical are not found in the *Ordo*. Throughout the service the rubrics are much fuller than in the *Ordo*, which is altogether not so closely followed as in the case of the dedication of a church.

This office for the consecration of a bishop has twelve unfinished pictures. These, however, are of considerable interest, and they show the hand of a

<sup>a</sup> *De Divinis Cath. Eccl. Officiis*, Parisiis, 1624, 107.

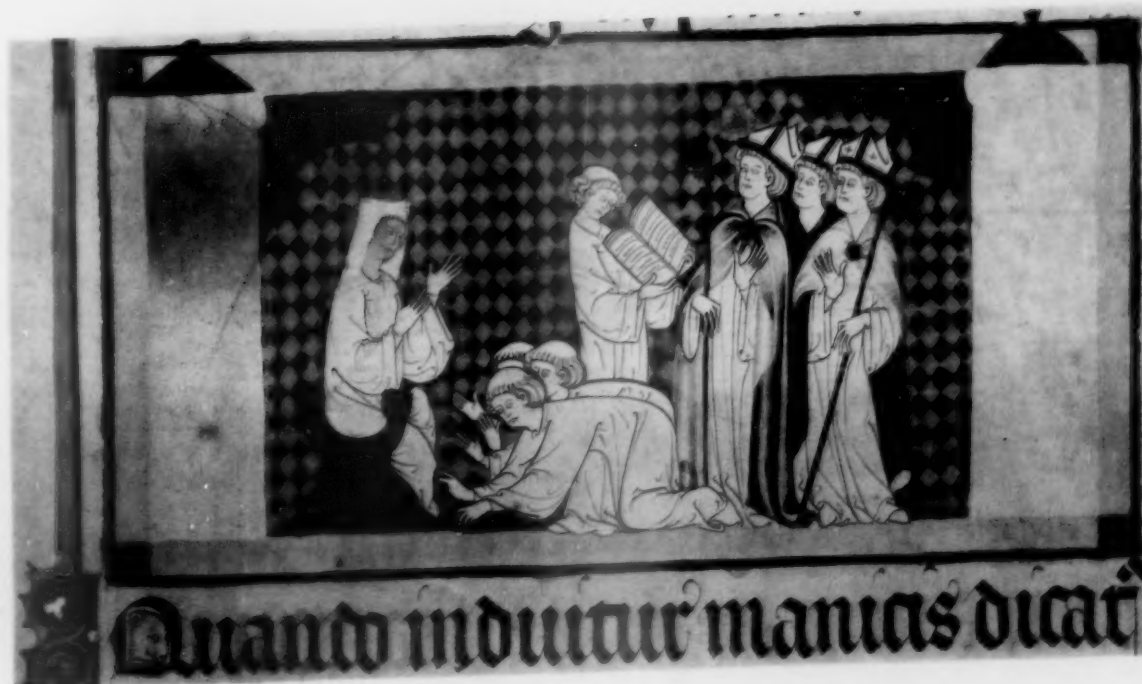


BROOKE PONTIFICAL.— { 1. BISHOP PLACING RELICS IN THE ALTAR (fo. 46).  
2. PROCESSIONAL ENTRY FOR THE DEDICATION MASS (fo. 50).





**B**enedictio abbatisse canonica  
regulam proficentis. fiat si  
aut abbatisse monacharum. et fit of



**Q**uando induitur manicis dicat.



masterly draughtsman. One of the most interesting is on fo. 115 (Plate XXXVI., fig. 2), where the bishop elect is seated on a faldstool, and three clerks are putting on his buskins.<sup>a</sup> Drawn over his head is seen the almuce (*almutium*), which is seldom or never represented as worn in that manner in England. But in French art canons are often so distinguished, as for example in the *Liber Regalis* of Charles V. of France, dated 1365, where one of the canons of Rheims in the procession which meets the king at the entrance of the cathedral church is so vested.<sup>b</sup> In Scotland, too, this mode of wearing the almuce may be seen at St. Machar's, Aberdeen, where several effigies of canons vested in chasubles have the almuce drawn over their heads.

Other pictures show the metropolitan (who in the last eight is represented as wearing the *super-humeral*) performing the acts of laying hands on the head of the bishop-elect (fo. 117), anointing his head (fo. 123) and his hands (fo. 127), giving the ring (fo. 129, Plate XXXVII., fig. 1), the crosier (fo. 130), the book of the gospels (fo. 131), and the mitre (fo. 136 b). Perhaps the most interesting is that on fo. 132 b (Plate XXXVII., fig. 2), which shows the bishop making the offering of bread, wine, and candles to his metropolitan, whilst at the same time he kisses his extended hand.<sup>c</sup> The newly consecrated bishop, who is kneeling, has the linen band still wrapped round his head which was placed there before the unction of his crown.

Having now rapidly reviewed the general contents of the book, we must, before parting with it, pay some attention to its purely ornamental features. The initial letters and borders are of singular beauty and great interest. The large initial letters are sometimes filled with scroll patterns of most intricate design; at other times they are filled with shields of arms now erased, whilst many of them are historiated with subjects illustrating Pontifical ceremonies. But in the lower margins the artist felt himself at liberty to indulge his exuberant fancy by pictures and caricatures of the life around him, and by the creation of legions of delightful animals who gravely mimic the doings of mankind. We cannot help feeling that the bishop who had this book held before him must have been more

<sup>a</sup> This has been already figured and commented on by Dr. J. Wickham Legg in his paper on "The Black Scarf of Modern Church Dignitaries and the Grey Almuce of Mediæval Canons," in *Transactions of the St. Paul's Ecclesiological Society*, iii. 48.

<sup>b</sup> British Museum, Cott. MS. Tiberius, B 8, fo. 43.

<sup>c</sup> The rubric is as follows: *Deinde cantetur offertorium . et dum cantatur offertorium . consecratus offerat consecratori duos magnos panes . et duas fialas vini . et duos magnos cereos . et consecrator oblata leviter tangat. Facta autem oblatione consecratus osculetur manum consecratoris.* (fo. 132).



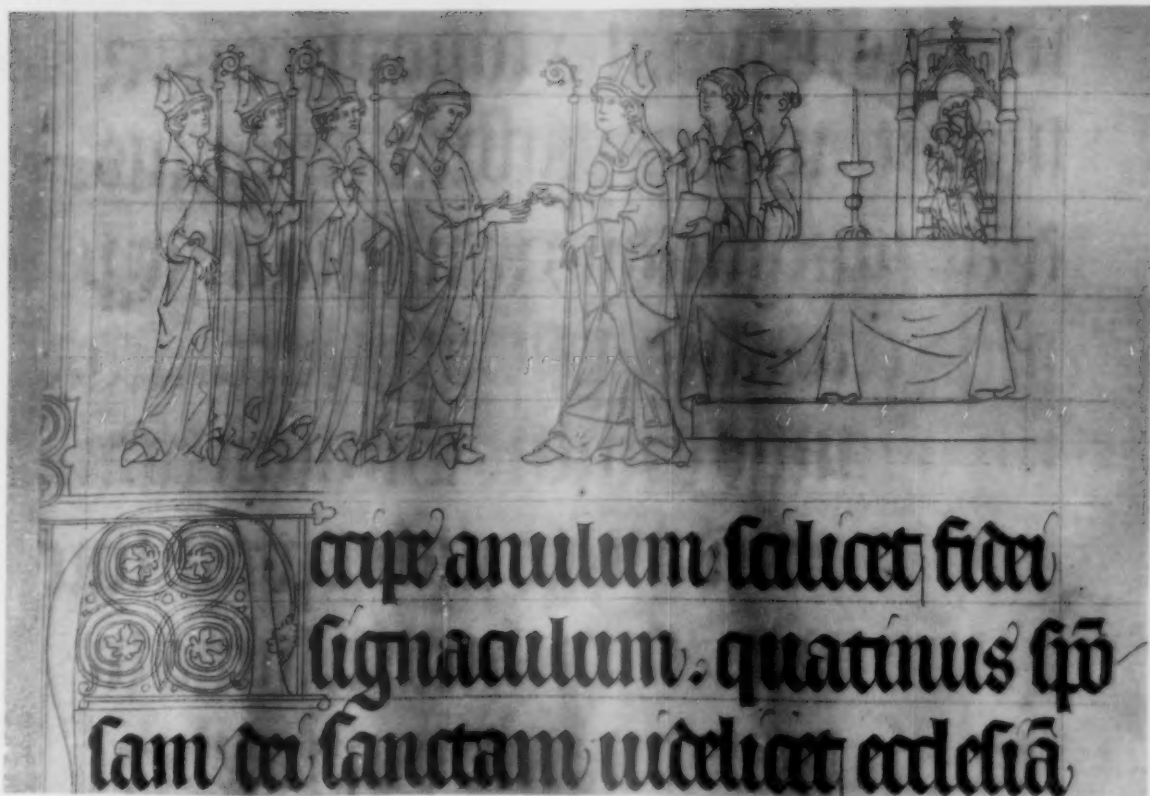
than human if his eye did not sometimes wander from the matter of the text to seek refreshment in these charming pictures of the animal world turned topsy-turvy.

The scenes taken from everyday life are drawn with great spirit. Amongst them may be noticed a fox carrying off a cock, while two half-clad peasants are in pursuit, the man with a pitchfork and the woman with a distaff (fo. 1 b). Then we have brought before us the sports of the period in games of bowls (fo. 103), walking on stilts (fo. 116), a game resembling "hot cockles" (fo. 98), bear dancing (fo. 92), and numerous scenes of hawking and shooting birds. Sometimes we find fables such as that of the fox and the crow (fo. 87), or such legends as that of the unicorn (fo. 81 b and 131 b).

But perhaps the humour of the artist is seen at its best in those pictures of the animal world in which hares are the leading actors. Of the one hundred and five historiated borders the hare appears in no less than forty-eight. In one picture only does the hare appear as the persecuted victim of the lords of creation, viz. on fo. 77 b, where a man is carrying a dead hare over his shoulder. In all other cases the hare meets man on terms of equality, and either engages in the ordinary occupations and amusements of life, such as playing the organ (fo. 79 b, Plate XXXIX., fig. 3), dancing to music (fo. 115), and so on, or at other times he wages warfare against his hereditary enemy, and the tables are nearly always turned and the hare comes off victorious. The great scene of all is an attack on a castle, which is planned and carried on by valorous hares in accordance with the methods of mediæval warfare (fo. 41, Plate XXXIX., fig. 4). Of the knights defending the castle, one is armed with a cross-bow and another is hurling a stone. The attacking party consists of five hares; one is using the cross-bow, another is working with a pickaxe at the foundations of the castle, another still more valiant is climbing the scaling ladder, while a fourth is working an engine for throwing stones. One hare only has paid the penalty of his rashness, and is lying on the ground crushed by a stone, whilst his fore-paws, united in the act of prayer, show that the hares combined piety with their valour.

A good example of a judicial duel is given on fo. 104b. (Plate XXXVIII., fig. 4), the combatants being a man and a hare. The former is clothed in a close-fitting dress, which leaves the face, hands, and feet bare. Each of them is armed with a spiked club and a pointed shield, suited for attack as well as for defence.<sup>a</sup>

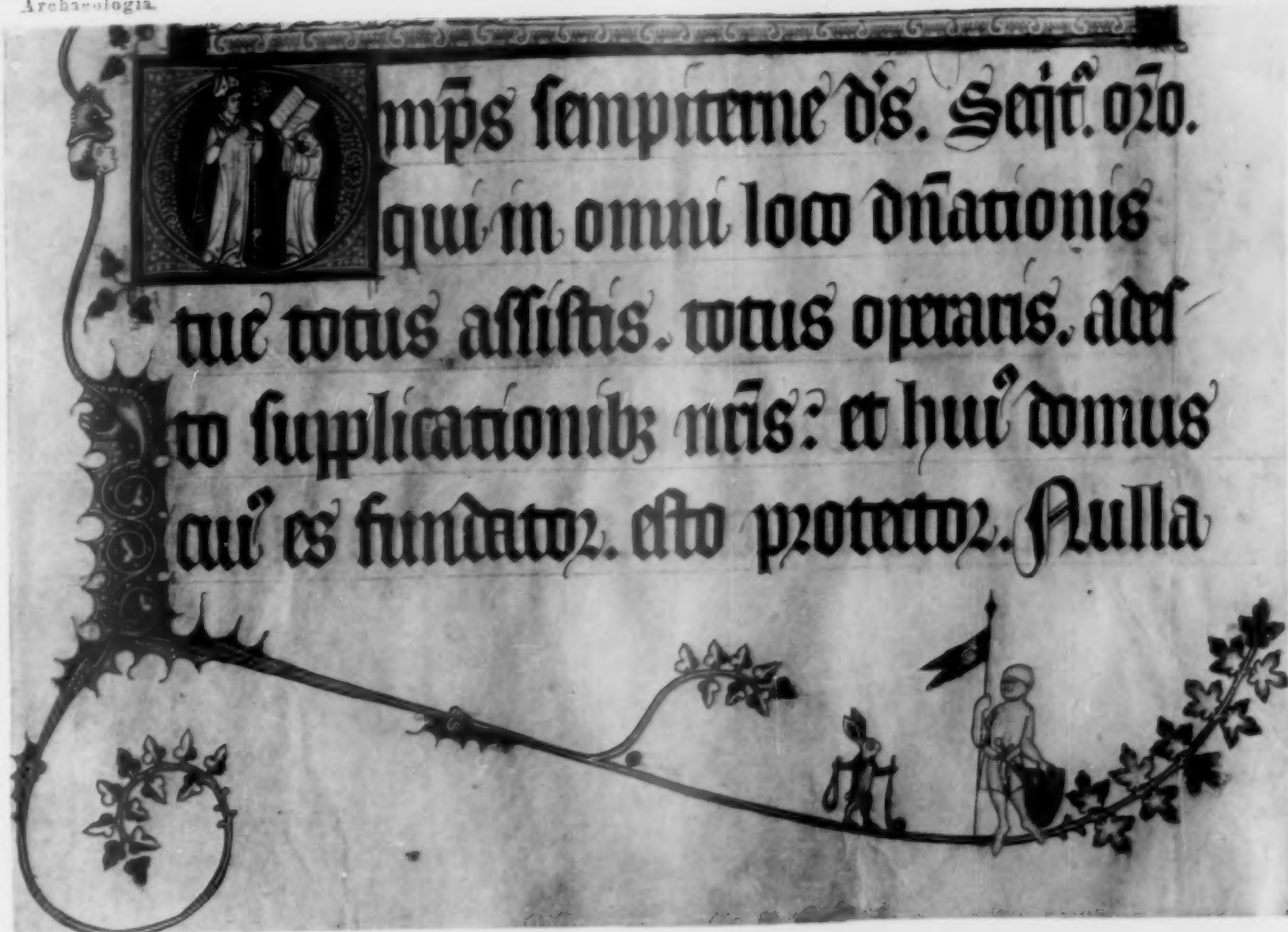
<sup>a</sup> For an interesting account of combats of this kind reference may be made to a paper by Mr. R. L. Pearsall, in "Some Observations on Judicial Duels, as practised in Germany" (*Archæologia*, vol. xxix. 348). The combat in the Brooke Pontifical may be compared with the plates which illustrate this paper, especially with Plate xxxv., fig. 1.



BROOKE PONTIFICAL.— { 1. GIVING THE RING TO A BISHOP (fo. 129).  
2. BISHOP OFFERING BREAD, WINE, AND CANDLES (fo. 132b).



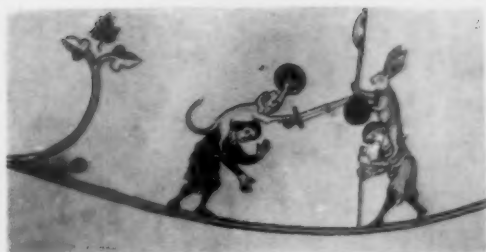
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4.





There are many other scenes in which hares take part deserving notice, but I will only direct attention to four of them. In the first, on fo. 7 (Plate XXXVIII., fig. 1), a hare armed with sling and staff is about to attack an armed knight, who on the pennon of his spear has a white snail on a red field for his armorial bearings, the group being evidently a parody of David and Goliath. In the second, on fo. 79 (Plate XXXIX., fig. 5), a hare is carrying off her two young ones in swaddling clothes, whilst a tailor holding a pair of shears seems anxious to exercise the instrument of his craft upon their skins. In another (fo. 48, Plate XXXIX., fig. 6) two hares are leading off to their dungeon a man they have captured, whose abject terror is shown by the way in which his hair literally stands on end. And lastly there is one in which the tables are turned upon mankind as completely as possible, for two hares have caught a man and are engaged in skinning him; one hare holds down his head, the other has already disengaged the skin of the man's right foot (fo. 74, Plate XXXIX., fig. 7).

Next to the hares the monkey is a favourite actor in these scenes, and appears some dozen times. The monkey simply performs ordinary human functions; sometimes he is spending his time in frivolous amusements, such as bird-catching; but more often he is engaged in the grave exercise of the profession of doctor of laws or of medicine. In one case he is seated with a doctor's cap on his head lecturing to an attentive class of his own fellow-species (fo. 76, Plate XXXIX., fig. 8); and in others he is practising the healing art. The patient in one case is a dropsical man supported on crutches (fo. 25, Plate XXXIX., fig. 9); and in another a stork holds up its left foot for the monkey to feel its pulse, whilst the latter carefully scrutinizes the glass containing the bird's urine before giving his diagnosis of the case (fo. 81, Plate XXXIX., fig. 10). With this physiological absurdity we must conclude the notice of the grotesques.

The pleasant duty remains to me of expressing my deep obligation to Mr. Thomas Brooke for his great kindness in allowing this precious MS. to remain in the Society's keeping for a lengthened period, in order to facilitate its full examination. I am also much indebted to Mr. W. H. St. John Hope for his advice in selecting the pictures which have been photographed, and for much help and encouragement whilst engaged in the preparation of this paper. To him also the Society owes a debt of gratitude for his good offices in inducing Mr. Brooke to allow this MS. to be brought to London.



# LIST OF PLATES.

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- XXXI. Watching the relics (fo. 1).
- XXXII. 1. Procession with the relics (fo. 5*b*).
- 2. Bishop knocking at the church door (fo. 11).
- XXXIII. Bishop writing the alphabet on the church floor (fo. 14).
- XXXIV. 1. Bishop anointing the altar (fo. 31*b*).
- 2. Bishop hallowing the church door (fo. 43*b*).
- XXXV. 1. Bishop placing relics in the altar (fo. 46).
- 2. Processional entry for the dedication mass (fo. 50).
- XXXVI. 1. Blessing an abbess of canonesses (fo. 92*b*).
- 2. Vesting a bishop-elect (fo. 115).
- XXXVII. 1. Giving the ring to a newly-consecrated bishop (fo. 129).
- 2. A newly-consecrated bishop offering bread, wine, and candles (fo. 132*b*).
- XXXVIII. Ornaments of lower margins :
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  - 2. Illuminated initial.
  - 3. Combat between a dog and a hare, mounted on men's shoulders
  - 4. Judicial duel between a man and a hare.
- XXXIX. Scenes from lower margins :
  - 1. Knight attacking a snail.
  - 2. Knight's farewell before going forth to attack a snail.
  - 3. Hare playing upon a pair of organs.
  - 4. Hares attacking a castle.
  - 5. Tailor threatening a hare and her young.
  - 6. Hares leading a man to prison.
  - 7. Hares skinning a man.
  - 8. Monkey lecturing his class.
  - 9. Dropsical man consulting his leech.
  - 10. Stork consulting a monkey-doctor.

NOTE.—All the pictures are full size except that shown on Plate XXXIII., which is slightly reduced.

1.



6.



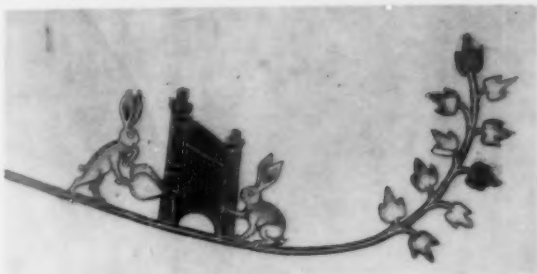
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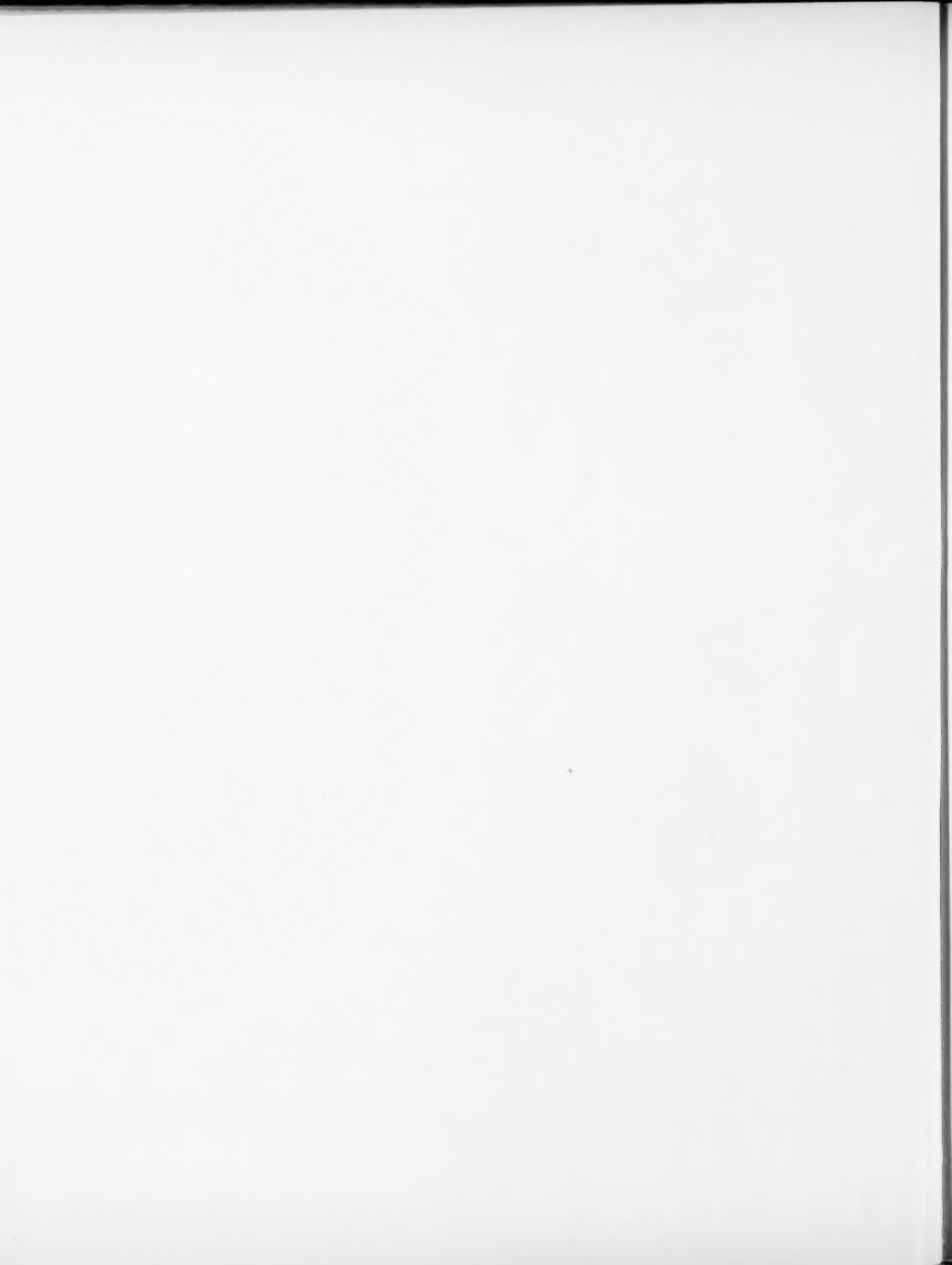


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10.





XXII.—*On the Discovery of some Remains of the Chapter-house of Beverley Minster.*  
*By JOHN BILSON, Esq.*

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Read March 15th, 1894.

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THE remains which are the subject of these notes are, unfortunately, but scanty, and belong to the undercroft of the chapter-house, rather than to the chapter-house itself. Still, slight as they are, they enable us to determine with sufficient accuracy the plan of what must have been a beautiful addition to this most beautiful church.

In 1188, Beverley Minster was seriously injured by fire. Of the church as it existed before the fire little or nothing now remains in position, but it is certain that the nave was preserved until it was taken down in the first quarter of the fourteenth century, when the present nave was commenced. It is clear, too, that the choir and transepts were not begun until some considerable time after the fire, probably not before about 1220. The new works were apparently planned without reference to the lines of the earlier building, except that the width of the nave within the aisle walls may have been followed in the new eastern arm. The works of the thirteenth century comprise the choir, with its eastern transept, the great transept, and one bay westward of the main crossing. The plan is remarkably regular and perfect, and was carried out with scarcely any departure from the original design.

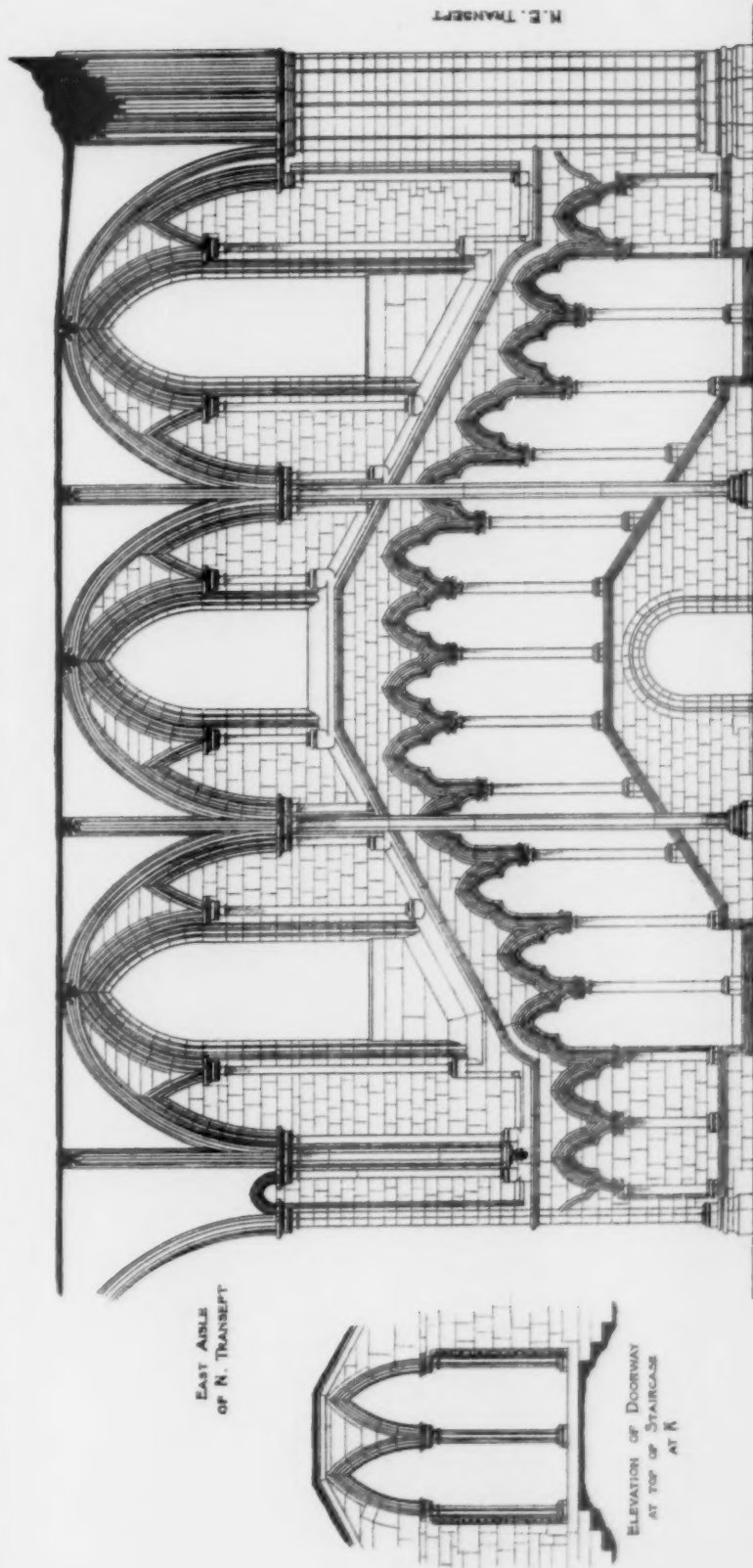
Beneath the aisle windows, throughout the thirteenth-century work, the walls are enriched internally with an arcade of trefoiled arches supported by shafts of Purbeck marble, with carved capitals of the *crochet* type. In the north aisle of the choir, between the eastern and great transepts, the design of this wall arcade is very cleverly adapted to form a staircase of two flights, rising to a double door-

way, which is now walled up (Plate XL.). In the centre, beneath the upper landing of the staircase, is a doorway with a semicircular arch of two orders, which now gives access to modern vestry buildings occupying the space between the eastern and great transepts, immediately north of the aisle wall.

This staircase was generally supposed to have led to the chapter-house, but until recently proof of this supposition was wanting. In September, 1890, in excavating for a new rain-water drain, a considerable fragment of walling was found, to which Dr. Stephenson of Beverley at once called my attention as being part of the foundation of an octagonal chapter-house. Further excavations revealed other remains, which I will now proceed to describe in detail. The fragments of walling actually found are shown in black on the plan, on which the dotted lines and hatching represent conjecturally the complete structure. This was an undercroft of octagonal plan, surmounted by the chapter-house itself.

The wall first discovered (marked A on the plan, Plate XLI.) included the base-courses of the greater part of the length of the south-western face of the octagon, to a height, in the most perfect part, of 4 feet 7 inches above the foundation. A section of the base-course is shown on Plate XLIII. The two moulded courses are exactly similar in section to two of the mouldings in the base-course of the whole eastern part of the church itself, and are clearly of the same date. At the north-western extremity of this wall, part of the buttress at the angle between the western and south-western faces was found, with what appeared to be the sill and jamb-stone of a narrow doorway (B on the plan, Plate XLI.), possibly that of a newel staircase. At C, through the lowest course of the wall, and a few inches below the level of the undercroft floor (as subsequently ascertained), was a lead-lined channel,  $5\frac{1}{2}$  inches in width. The internal face of the wall had been removed on this side. At D the lowest courses of a wall parallel with the north wall of the modern vestry were found, the foundation of which was some 16 inches above that of the wall of the undercroft. This wall had a chamfered plinth. I believe it to have been part of a modern building removed when the vestry was erected. A modern doorway, now walled up, which had been broken through the wall at the west end of the back of the staircase, may have given access to this building.

Outside the north-west angle of the eastern transept, at E on the plan (Plate XLI.), we found part of the base-course of the south-west face of the angle buttress between the eastern and south-eastern sides of the octagon. In this case the upper moulding was missing, but the lower moulding was returned upwards, as if to meet the base-course of the transept buttress. An elevation and perspective



SECTION THROUGH NORTH CHOIR AISLE LOOKING NORTH  
SHOWING STAIRCASE TO CHAPTER HOUSE

PLAN OF STAIRCASE

SCALE OF FEET

10 20 30 40 50

*Shelton*  
1850 12 1891





sketch of this fragment are given on Plate XLIII., which also shows the relative height of the base-course of the transept buttress.

At F we found a fragment of the internal face of the south-east wall of the undercroft, as well as the rammed chalk bed upon which the floor was laid. The filling-in on the inside of this wall consisted of consecutive layers of stone chippings, rammed chalk, gravel, and small chalk, and at the top, extending over the walling, a layer of wood ashes.

The base of the central pier of the undercroft was found at G. This base had a chamfered plinth, octagonal on plan, with the angles of the octagon opposite the sides of the octagon of the building itself. Upon this plinth was a moulded base of a simple section (see Plate XLIII.) which is found in early thirteenth-century work at Lincoln and elsewhere, in out-of-the-way situations. Nothing remained of the pier itself, but the base-moulding showed that in plan it was a polygon of sixteen sides. As will be seen from the plan, this central pier is placed on the centre line of the staircase and of the corresponding bay of the choir, and is, in fact, set out so accurately that the actual centre deviated only  $1\frac{1}{2}$  inches from the centre, as worked out from the remains discovered before the pier base was found.

At the base of this central pier was also found a part of the stone floor of the undercroft, from which its level was ascertained to be 5 feet  $6\frac{3}{4}$  inches below the floor level of the north aisle of the choir. The threshold of the double doorway at the top of the staircase is 7 feet  $9\frac{1}{2}$  inches above the level of the aisle floor. Assuming that this threshold represents the level of the chapter-house floor, the latter would be 13 feet  $4\frac{1}{4}$  inches above the floor level of the undercroft. It is very likely, however, that this height would be increased by one or two steps at the doorway into the chapter-house itself.

I should add that all the masonry discovered was built of oolitic limestone from the Newbald quarries, the stone which was used for all the works in this church until the latter part of the thirteenth century.

It is much to be regretted that, after these discoveries had been made, the authorities would not allow any further excavations outside, especially as a trench dug outside the northern face of the north transept would not have interfered with any graves, and might have yielded further information as to the form of the angle buttresses. Everything was, however, covered up again, and the drawings which illustrate this paper are the only record of what was found.

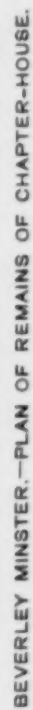
In March, 1891, Mr. W. Stephenson and I obtained permission to excavate beneath the floor of the modern vestry, where we hoped to find the steps from

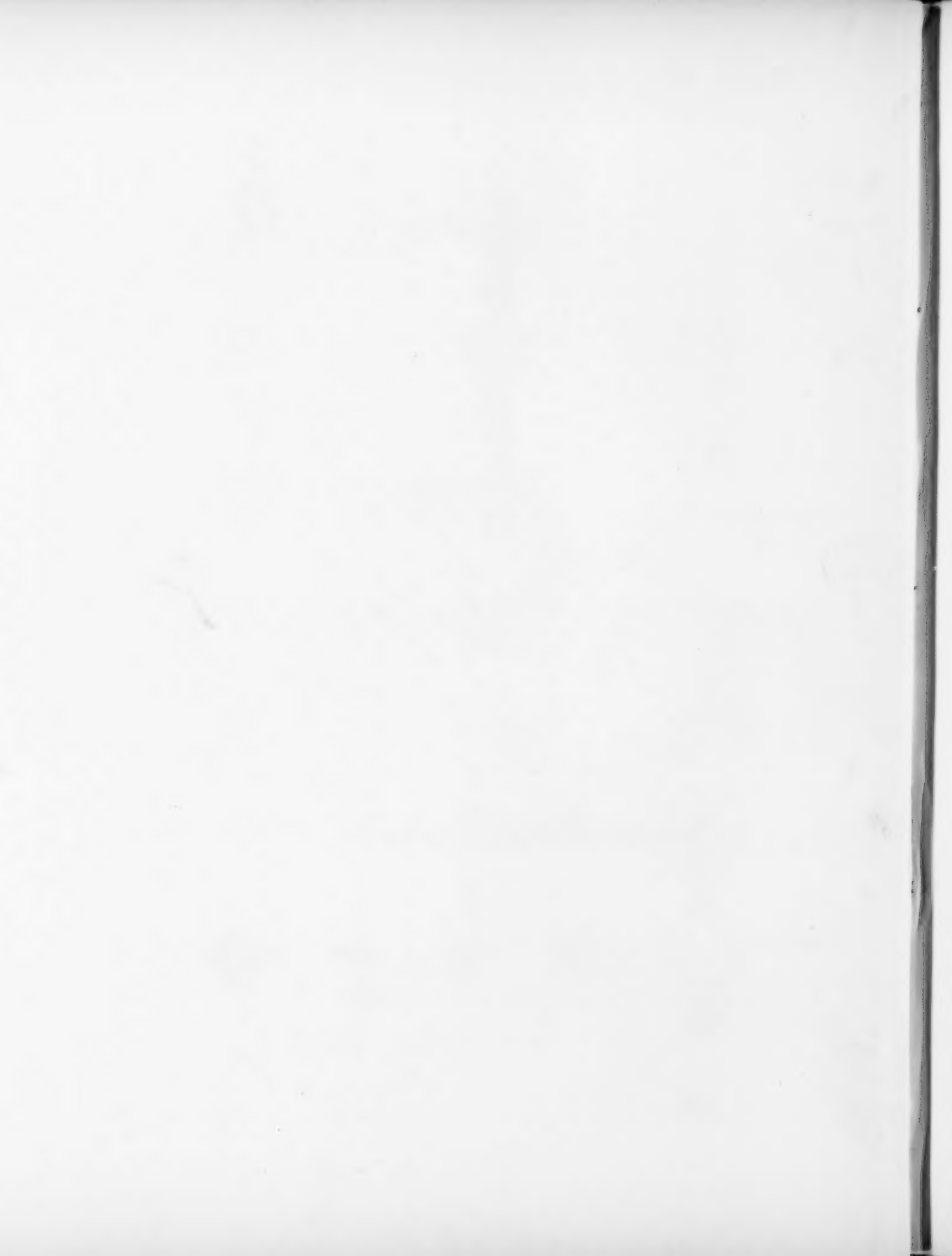
the choir aisle to the undercroft. Our hope was realised. We found that, including the present step in the doorway under the staircase, there were six steps in all, with a stone sill at the bottom of the flight. The sill and lowest three steps were still in place, though the second step had been moved to receive a sleeper wall for the modern floor. The steps were considerably worn, and ashes were found on the sill at the foot of the flight. From this point, the floor of the passage sloped away rapidly towards the undercroft. The floor had been paved with tiles, and the mortar bed which received them still existed. Two broken pieces of the tile pavement were found in position. The tiles were of red baked clay, with yellow and dark green glaze, and covered with a pattern. We also found, at H, the inner face of the west wall of the passage leading to the undercroft, which fixed the width of the passage as about 10 feet 6 inches. The steps, etc. are shown on the plan (Plate XLI.), and section (Plate XLII.).

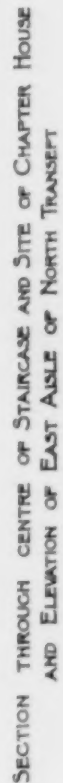
The filling-in of this passage consisted largely of fragments of moulded stonework. Some of these clearly belonged to the upper passage from the double doorway at the top of the staircase to the chapter-house itself. A vaulting-rib and a capital of a triple shaft are shown on Plate XLIII. These correspond in section with the arches and capitals of the double doorway, where the springings of the diagonal ribs of the vaulted passage are still to be seen. A piece of moulded bench-table found in this excavation is also shown on Plate XLIII.

From these remains we derive then the following conclusions. The building was octagonal in plan, and of two storeys in height. The undercroft was approached from the doorway under the staircase in the north aisle of the choir, by steps and a passage leading to a doorway in the south face of the octagon. The chapter-house itself was approached from the north choir aisle by the double staircase, and by a vaulted passage from the double doorway at the top of the staircase, leading to a doorway in the south face of the octagon. The undercroft was 28 feet 6 inches in internal diameter, and 38 feet 2 inches in external diameter above the base-course. The chapter-house itself was apparently about 31 feet in internal diameter, and, as the plan of the eastern part of the church is based on squares of 16 feet, it seems probable that the octagon was inscribed in a circle of 32 feet diameter, measured in the clear of the vaulting-shafts.<sup>a</sup> The undercroft was vaulted from a central pier. The chapter-house itself was doubtless vaulted in one span, without a central pillar; for the diameter of the pier of the under-

<sup>a</sup> The polygons of the chapter-houses of Lincoln, Westminster, Salisbury, and York seem to have been inscribed in circles of 60 feet diameter, measured in the clear of the vaulting shafts. (Sir G. G. Scott's *Gleanings from Westminster Abbey*, 2nd ed., p. 39.)







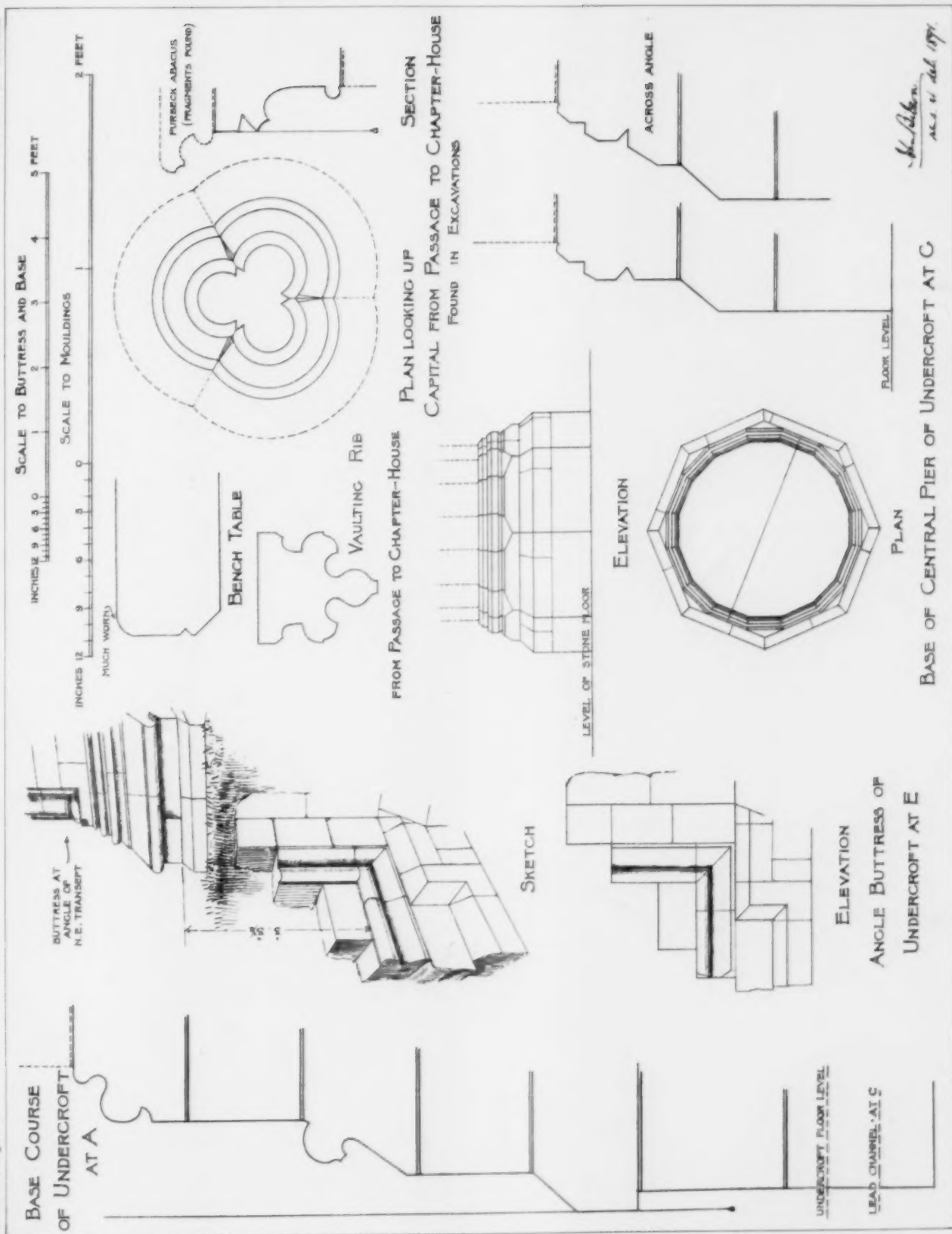
20  
SCALE OF FEET

Figure 1 is a line graph showing the dependence of the rate of polymerization ( $R_p$ ) on the concentration of the initiator ( $C_i$ ). The y-axis is labeled  $R_p$  and ranges from 0 to 50. The x-axis is labeled  $C_i$  and ranges from 0 to 10. The curve shows a sharp increase in  $R_p$  as  $C_i$  increases from 0 to about 2, followed by a gradual increase.

11. *Albino*  
see vol. del. 189.









croft appears to be too small to support an upper pier, and the moderate width to be vaulted would be well within the power of the builders, being, in fact, only little more than the width of the choir itself. The undercroft was, no doubt, the sacristy (I am indebted to Mr. Micklethwaite for the suggestion), and its position would be very convenient for such a purpose. The whole structure was contemporary with and formed part of the design of the eastern arm of the church, with which it was connected. Its date may be stated approximately as 1230.

One of the most remarkable points about its plan is the curious way in which it is squeezed in between the two transepts. The western face of the octagon is very close to the east wall of the north transept aisle, and one of the angle buttresses abuts on the buttresses at the angle of the north-east transept.

The difference in level between the plinth of the undercroft and the plinths of the church generally is another remarkable feature. There can be no doubt, however, that the ground on the north side of the church was formerly at a considerably lower level than at present, and this may conceivably have suggested the idea of an undercroft. Excavations in Highgate (the street running northward from the north porch) have proved that its present level is some 7 feet above that of the natural surface. The floor of the undercroft would thus be about 5 feet above the original ground level at the south end of Highgate. High ground would doubtless be chosen for the site of the church, and its floor level thus raised above its marshy surroundings.

The sale of the chapter-house, after the suppression of the collegiate church, is recorded in a document filed among the Chantry Certificates at the Public Record Office.<sup>a</sup> Its destruction was so complete that probably little more now exists beneath the surface than the few fragments recently uncovered. The base-course on the east side of the north transept is post-reformation work, though part of the thirteenth-century base-course still remains at the back of the staircase. The masonry of the lower part of the walls and the faces of the transept buttresses have been so extensively renewed as to remove whatever indications there may have been of the abutting buttresses of the chapter-house.

In order to show clearly the relation of the plan and arrangement of the chapter-house of Beverley Minster to other similar examples, I have prepared a table of the circular and polygonal chapter-houses in Great Britain,<sup>b</sup> arranged in

<sup>a</sup> I am indebted to Mr. Wm. Page, F.S.A., for the knowledge of this document, which will be printed in his forthcoming volume of *Yorkshire Chantry Certificates for the Surtees Society*.

<sup>b</sup> The table will be found at the end of this paper. I have to acknowledge the great assistance kindly given me, in its compilation, by the Rev. Precentor Venables, Mr. W. H. St. John Hope, Mr. C. C. Hodges, and others.

approximate chronological order. It may, perhaps, be interesting to trace briefly the history of this class of structures, with regard to the form of the chapter-house itself, and its arrangement in relation to the plan of the church. It will be unnecessary for my present purpose to deal with the earlier, and much more common, rectangular form, which was uniformly adopted in France, where the polygonal form never appears, or with such variations of the rectangular plan as are to be found in chapter-houses with apsidal eastern terminations, as, for example, those at Durham, Reading, and Norwich.

First, then, as to the form of the structure itself. The earliest mention of a chapter-house of circular plan is to be found in a description, written in the time of Henry the Third, of the Confessor's church of Westminster, in which we are told that he built there a cloister, a chapter-house in front, towards the east, vaulted and round.\* The circular form had long been used for other buildings, and its obvious suitability for assemblies of a capitular body is quite sufficient to account for its adoption. It is worthy of remark, however, that the circular and polygonal form, which in later times was so commonly preferred for chapter-houses attached to churches of secular canons, appears first in monastic plans. The chapter-house of Worcester, which dates from the early part of the twelfth century, is the earliest existing example of the circular form. It was originally circular both externally and internally, but about the year 1400 its external appearance was altered to a decagon. It is covered with a Norman ribbed vault, springing from a central pillar. It appears to have furnished the inspiration for the plan of the chapter-house of Margam, which is circular internally and a duodecagon externally, and that of Abbey Dore, which is a duodecagon both externally and internally. These examples illustrate the transition from the earlier, circular, to the later, polygonal, form. Alnwick is a curious combination of the circular and rectangular plan of late twelfth-century date. Lincoln is the earliest example of the decagon, which was adopted also at Evesham, Bridlington, and Hereford. Beverley seems to be the earliest known example of the more common octagonal form, which was

\* This statement appeared to me to be warranted by the following lines (2308-2311) in *La Estoire de Seint Aedward le Rei* (*Lives of Edward the Confessor*, ed. H. R. Luard, Rolls Series, 1858):

"Clostre i fait, chapitre a frund,  
Vers Orient vouse e rund,  
U si ordené ministre,  
Teingnent lur secrei chapitre."

It would, however, seem more probable that this Westminster chapter-house was not circular, but had, as Mr. J. T. Micklethwaite suggests, an apsidal eastern termination. See Mr. Micklethwaite's paper, *Archaeological Journal*, li. 9.

adopted in the monastic chapter-houses of Westminster, Thornton, Cockersand, Carlisle, and Bolton, and in chapter-houses attached to churches of secular canons at Lichfield (an elongated octagon), Salisbury, Wells, Elgin, Southwell, York, Old St. Paul's, Howden, Manchester, and partially at Warwick. Most of the larger chapter-house were vaulted from a central pillar. They form a series of buildings which is as admirable architecturally as it is characteristically English.

With regard to their arrangement in relation to the plan of the church, all the circular and polygonal chapter-houses of monastic houses are placed on the east side of the cloister, and are approached either directly from the east walk of the cloister, as at Worcester and Alnwick, or, as was more generally the case, through an intervening vestibule. The chapter-houses of secular canons exhibit a greater variety of position. In those churches where, in imitation of monastic plan, the somewhat superfluous luxury of a cloister was adopted, *e.g.* at Salisbury and Hereford, the chapter-house occupies the normal monastic position on the east side of the cloister; though at Wells, where a cloister also exists, the chapter-house is placed on the opposite side of the church. At Old St. Paul's the chapter-house was in the centre of the cloister.<sup>a</sup> But in the remaining examples the chapter-house is placed in what we may consider to have been the normal position in churches of secular canons, *viz.* immediately to the north or south of the choir of the church<sup>b</sup>; on the south side at Howden and Manchester, and on the north side in the seven other examples. The chapter-house was thus much more intimately connected with the church, and formed part of its plan, instead of being the chief of a group of buildings around the cloister, as in monastic plans. The contemporary chapter-houses of Lincoln and Beverley are the earliest instances of the adoption of this position. That of Lincoln, however, is placed much further to the east than usual, and is approached from the north end of the eastern transept, the cloister here being an addition of later times. On the other hand, the position of the chapter-house of Beverley, immediately to the north of the choir aisle, and its approach therefrom through a vestibule, seems to represent the more general type followed in churches of secular canons. Lichfield and Southwell show a similar arrangement, the vestibule leading from the choir aisle to an entrance in the western face of the octagon. I may note, in passing, that one of the angle-buttresses of the chapter-house of Southwell abuts

<sup>a</sup> The chapter-house of Belvoir (Benedictine) is said to have occupied a similar position.

<sup>b</sup> In some churches of secular canons, such as Exeter and the Welsh cathedrals, the rectangular form of chapter-house was retained.



against the north-west angle of the eastern transept, much in the same way as at Beverley. The chapter-houses of Wells and York occupy somewhat similar positions, but are approached from the north transept; though the undercroft at Wells is approached from the north choir aisle, as at Beverley. At Elgin, Howden, and Manchester the chapter-houses are approached more directly from the choir aisle. Besides Beverley, three only of these polygonal chapter-houses had undercrofts, viz. Westminster, Old St. Paul's, and Wells. At Westminster the undercroft was built for the Treasury of the King's Wardrobe. At Old St. Paul's the undercroft seems to have been adopted in order that the chapter-house might be approached from the *upper* storey of the cloister. Wells presents the only real parallel to Beverley in this respect, the undercroft in each case serving as the sacristy. At Wells, however, the floor of the undercroft is nearly at the same level as the floor of the church, while that at Beverley is more than five feet below. The Wells chapter-house was an afterthought, and is approached by a staircase from the eastern aisle of the north transept, which can scarcely have been so convenient an arrangement as the direct approach from the choir aisle at Beverley. The approach to the Beverley chapter-house is, in fact, as unique in arrangement as it is beautiful in effect. Viollet-le-Duc<sup>a</sup> illustrates a double sacristy of the end of the twelfth century, which formerly existed at the cathedral church of Notre-Dame, Paris. Both storeys were approached by stairs from the south choir aisle, the lower sacristy by six descending steps, the floor of the upper sacristy by a longer staircase rising to a height of some 14 feet above the aisle floor. Is it possible that the designer of the work at Beverley may have borrowed his inspiration from this distant source?

The plan of the chapter-house of Beverley Minster, as developed from the remains I have described, is therefore interesting as an early example of the polygonal form, and, in fact, the earliest known instance of the octagonal plan; as one of the earliest chapter-houses of a type of arrangement which was afterwards generally followed in churches of secular canons; as a parallel example to the sacristy undercroft of Wells; as possessing a beautiful and unusual method of approach from the church; and, above all, in the fact that it was contemporary with, and formed a consistent and integral part of, the design of the eastern arm of the church itself.

<sup>a</sup> *Dictionnaire Raisonné de l'Architecture Française du XI<sup>e</sup> au XVI<sup>e</sup> Siècle*, viii. 70 (Art. Sacristie).

Locality.	Ord.	Reference to Plan.	Remarks.
Worcester - -	Benedic	<i>Journal</i> , xx. 317; <i>Transactions</i> , 32-3 (Willis); <i>Builder</i> , August 6, 1892	Vaulted in stone with central pillar.
Alnwick - -	Præmon	<i>Journal</i> , xlv. 337 (W. H. St. John Canon)	
Margam - -	Cisterci	8, 1893 (Roland W. Paul) - - -	Vaulted in stone with central pillar.
Abbey Dore - -	Cisterci	8, 1893 (Roland W. Paul) - - -	Vaulted in stone with central pillar.
Lincoln - -	Secular	<i>Journal</i> , xl. 192; <i>Architectural Sketch Book</i> , vol. xl. O.S.; <i>Builder</i> , 1891	Vaulted in stone with central pillar.
Beverley - -	Secular	v. pls. xl.-xliii. - - - - -	Undercroft had central pillar.
Lichfield - -	Secular	ary 7, 1891 - - - - -	Vaulted in stone with central pillar. Of two storeys. Upper now used as a library.
Westminster - -	Benedic	<i>from Westminster Abbey</i> ; <i>Archæol.</i> , xxxiii. and li.	Vaulted in stone with central pillar. Undercroft.
Salisbury - -	Secular	, 1891 - - - - -	Vaulted in stone with central pillar.
Wells - -	Secular	2, 1891; <i>Architectural Association</i> vol. ix. N.S.	Vaulted in stone with central pillar. Undercroft nearly level with floor of church.
Elgin - -	Secular	3, 1894 - - - - -	Vaulted in stone with central pillar.
Thornton - -	Augusti	<i>Architectural Societies' Reports</i> , 1852 - Canon	Vaulted in stone. Probably had central pillar.
Southwell - -	Secular	2, 1892 (Mr. Ewan Christian's plan) -	Vaulted in stone. No central pillar.
Cockersand - -	Præmon	<i>of the Lancashire and Cheshire Anti-Canonry</i> , iv. 26	Vaulted in stone with central pillar.
York - -	Secular	ry 7, 1893 - - - - -	Vaulted in wood. No central pillar.
Evesham - -	Benedic	<i>enta</i> , vol. v. pl. lxvii. - - - -	Vaulted in stone.
Carlisle - -	Augusti	son's plan - - - - - Canon	
Bridlington - -	Augusti	suppression Survey as "a very fayre Chapter House w <sup>t</sup> ix fayre lyghts Canons . . . coveryd w <sup>t</sup> lede spere facyon."	
Old St. Paul's - -	Secular	<i>see Cathedrals of St. Paul</i> - - -	Had an undercroft.
Hereford - -	Secular	ary 6, 1892 - - - - -	Vaulted in stone with central pillar.
Bolton - -	Augusti	<i>Archæological and Topographical Association Programme</i> , 1877	
Howden - -	Secular	<i>Archæological and Topographical Association Programme</i> , 1885	Vaulted in stone. No central pillar.
Manchester - -	Secular	1, 1893; J. S. Crowther's <i>Cathedral Manchester</i> , 1893	Vaulted in wood. No central pillar.
Warwick - -	Secular	<i>Warwickshire</i> - - - - -	Has an undercroft.
Belvoir - -	Benedic	<i>ty of Leicestershire</i> , vol. ii. part i.	A rather doubtful case.

## CIRCULAR AND POLYGONAL

Locality.	Order, &c.	Position.	Approach.	Form.
Worcester - -	Benedictine - -	East side of cloister on south side of church	Direct from east walk of cloister - - - -	Circular (tenments)
Alnwick - -	Præmonstratensian Canons	East side of cloister on south side of church	Direct from east walk of cloister - - - -	Circular eastern with rectangular portion
Margam - -	Cistercian - -	East side of cloister on south side of church	From east walk of cloister through a vestibule - -	Circular (twelve internally; double externally)
Abbey Dore - -	Cistercian - -	East side of cloister on north side of church	From east walk of cloister through a vestibule - -	Dodecagon - -
Lincoln - -	Secular Canons - -	East side of (later) cloister on north side of choir	From north end of north-east transept by a passage (east walk of cloister) and through a vestibule to doorway in west face of decagon	Decagon - -
Beverley - -	Secular Canons - -	North side of choir between north transept and north-east transept	From north choir aisle by staircase and vestibule. Undercroft by steps from north choir aisle	Octagon - -
Lichfield - -	Secular Canons - -	North side of choir - -	By a passage from north choir aisle to a doorway in west face of octagon	Elongated octagon and south side bays)
Westminster - -	Benedictine - -	East side of cloister on south side of church	From east walk of cloister, through a vestibule, with steps up to chapter-house floor	Octagon - -
Salisbury - -	Secular Canons - -	East side of cloister on south side of church	From east walk of cloister through a vestibule - -	Octagon - -
Wells - -	Secular Canons - -	North side of choir - -	By staircase from north end of east aisle of north transept, to doorway in west face of octagon. Undercroft by passage from north choir aisle, to doorway in south-west face	Octagon - -
Elgin - -	Secular Canons - -	North side of choir - -	From north choir aisle through a vestibule - -	Octagon - -
Thornton - -	Augustinian Canons	East side of cloister on south side of church	From east walk of cloister through a vestibule - -	Octagon - -
Southwell - -	Secular Canons - -	North side of choir - -	From north choir aisle by a passage to doorway in west face of octagon	Octagon - -
Cockersand - -	Præmonstratensian Canons	East side of cloister on south side of church	From east walk of cloister through a vestibule - -	Octagon - -
York - -	Secular Canons - -	North side of choir - -	From north end of east aisle of north transept, by a passage turning to doorway in west face of octagon	Octagon - -
Evesham - -	Benedictine - -	East side of cloister on south side of church	From east walk of cloister through a vestibule - -	Decagon - -
Carlisle - -	Augustinian Canons	East side of cloister on south side of church	From east walk of cloister through a vestibule - -	Octagon - -
Bridlington - -	Augustinian Canons	East side of cloister on south side of church	From east walk of cloister probably through a vestibule	Decagon - -
Old St. Paul's - -	Secular Canons - -	In centre of cloister on south side of nave	From east walk of cloister by a passage - - - -	Octagon - -
Hereford - -	Secular Canons - -	East side of cloister on south side of church	From east walk of cloister through a vestibule - -	Decagon - -
Bolton - -	Augustinian Canons	East side of cloister on south side of church	From east walk of cloister by a passage - - - -	Octagon - -
Howden - -	Secular Canons - -	South side of choir - -	From south choir aisle through a vestibule - -	Octagon - -
Manchester - -	Secular Canons - -	South side of choir - -	From south choir aisle - - - -	Octagon - -
Warwick - -	Secular Canons - -	North side of choir - -	From north choir aisle - - - -	Semi-octagonal end; square so
Belvoir - -	Benedictine - -	In centre of cloister on north side of church	From south walk of cloister - - - -	Octagon - -

# AL CHAPTER-HOUSES IN GREAT BRITAIN.

Form.	Internal Diameter.	Date.	Condition.	Reference to Plan.	Remarks.
(ten compart- eastern portion, ctangular west- tion or vestibule	56' 0"	Norman, c. 1120; altered, c. 1400	Complete	<i>Archæological Journal</i> , xx. 317; <i>Transactions</i> , <i>R.I.B.A.</i> , 1862-3 (Willis); <i>Builder</i> , August 6, 1892	Vaulted in stone with central pillar.
Rectangular portion 30' 6" x 21' 7"	26' 10"	! Transitional - - -	Destroyed	<i>Archæological Journal</i> , xlv. 337 (W. H. St. John Hope)	
twelve bays) in- ; duodecagon lly	49' 0"	Transitional, c. 1190	- In ruins -	<i>Builder</i> , April 8, 1893 (Roland W. Paul) - - -	Vaulted in stone with central pillar.
on - - -	43' 0"	Lancet, c. 1220	- - - Destroyed	<i>Builder</i> , April 8, 1893 (Roland W. Paul) - - -	Vaulted in stone with central pillar.
- - - -	59' 0"	Lancet, c. 1220-1230	- Complete	<i>Archæological Journal</i> , xl. 192; <i>Architectural</i> <i>Association Sketch Book</i> , vol. xi. O.S.; <i>Builder</i> , November 7, 1891	Vaulted in stone with central pillar.
- - - -	About 31' 0"	Lancet, c. 1230	- - - Destroyed	<i>Archæologia</i> , liv. pls. xl-xlii. - - - -	Undercroft had central pillar.
Octagon (north th sides of two	40' 0" x 26' 0"	Lancet, c. 1240	- - - Complete	<i>Builder</i> , February 7, 1891 - - - - -	Vaulted in stone with central pillar. Of two storeys. Upper now used as a library.
- - - -	58' 0"	Geometrical, c. 1250	- Complete	Scott's <i>Gleanings from Westminster Abbey</i> ; <i>Archæo- logical Journal</i> , xxxiii. and ii.	Vaulted in stone with central pillar. Undercroft.
- - - -	58' 0"	Geometrical, c. 1260	- Complete	<i>Builder</i> , July 4, 1891 - - - - -	Vaulted in stone with central pillar.
- - - -	53' 6"	Geometrical: Undercroft, c. 1270; Chapter-house, c. 1298	Complete	<i>Builder</i> , May 2, 1891; <i>Architectural Association</i> <i>Sketch Book</i> , vol. ix. N.S.	Vaulted in stone with central pillar. Undercroft nearly level with floor of church.
- - - -	33' 0"	Originally, c. 1270; nearly rebuilt, 1462	Complete	<i>Builder</i> , March 3, 1894 - - - - -	Vaulted in stone with central pillar.
- - - -	42' 9"	Geometrical, c. 1282	- In ruins -	<i>Associated Architectural Societies' Reports</i> , 1852 -	Vaulted in stone. Probably had central pillar.
- - - -	31' 4"	Geometrical, c. 1280	- Complete	<i>Builder</i> , July 2, 1892 (Mr. Ewan Christian's plan) -	Vaulted in stone. No central pillar.
- - - -	27' 6"	Geometrical, c. 1290	- Complete	<i>Transactions of the Lancashire and Cheshire Anti- quarian Society</i> , iv. 26	Vaulted in stone with central pillar.
- - - -	58' 0"	Geometrical, c. 1300	- Complete	<i>Builder</i> , January 7, 1893 - - - - -	Vaulted in wood. No central pillar.
- - - -	51' 6"	Geometrical, c. 1282-1317	Destroyed	<i>Vetusta Monumenta</i> , vol. v. pl. lxvii. - - - -	Vaulted in stone.
- - - -	30' 0"	Geometrical - - -	Destroyed	Mr. C. J. Ferguson's plan - - - - -	
- - - -	— —	— — —	Destroyed	Described in Suppression Survey as "a very fayre aboute the same . . . coveryd w <sup>th</sup> lede apere iacyon."	Chapter House w <sup>th</sup> ix fayre lyghts
- - - -	32' 6"	Curvilinear, c. 1332	- Destroyed	Longman's <i>Three Cathedrals of St. Paul</i> - - -	Had an undercroft.
- - - -	41' 0"	Curvilinear - - -	Destroyed	<i>Builder</i> , February 6, 1892 - - - - -	Vaulted in stone with central pillar.
- - - -	30' 0"	! Curvilinear - - -	Destroyed	<i>Yorkshire Archæological and Topographical Asso- ciation</i> , Excursion Programme, 1877	
- - - -	26' 0"	Perpendicular, c. 1390	- In ruins -	<i>Yorkshire Archæological and Topographical Asso- ciation</i> , Excursion Programme, 1885	Vaulted in stone. No central pillar.
- - - -	18' 4"	Perpendicular - - -	Complete	<i>Builder</i> , April 1, 1893; J. S. Crowther's <i>Cathedral</i> <i>Church of Manchester</i> , 1893	Vaulted in wood. No central pillar.
gonal north are south end	18' 6" x 16' 6"	Perpendicular - - -	Complete	<i>Churches of Warwickshire</i> - - - - -	Has an undercroft.
- - - -	— —	— — —	Destroyed	Nichols' <i>History of Leicestershire</i> , vol. ii. part i. p. 79	A rather doubtful case.

*[The page contains several lines of handwritten text in a cursive script, likely from a manuscript. The ink is dark and the paper shows signs of age and wear.]*



XXIII.—*On a Latin Deed of Sale of a Slave; 24th May, A.D. 166.* By EDWARD  
MAUNDE THOMPSON, Esq., C.B., D.C.L., LL.D., F.S.A.

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Read June 21st, 1894.

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IN the year 1893 the British Museum acquired a remarkable Latin deed on papyrus, which, it is believed, was found a short time before in the Fayyum of Egypt. (Plate XLIV.) As in many particulars it is of unusual interest, I submit the following description to the Fellows of the Society.

The document is now deposited in the Department of Manuscripts, and bears the reference-number Papyrus CCXXIX. It is a deed of sale whereby Caius Fabullius Macer, *optio* of the trireme "Tigris," of the fleet of Misenum, purchases a boy named Abbas or Eutyches, one of the "Transfluminiani," about seven years of age, from Quintus Julius Priscus, a soldier on the same ship, for two hundred denarii and the amount of import dues (*capitulario portitorio*); the vendor warranting the boy sound, in accordance with the requirements of the edict of the Curule Ædile (*ex edicto*); and the purchaser stipulating for the repayment of the purchase-money (*simplam pecuniam*) in the event of a successful counterclaim, without notice of action (*sine denunciatione*) being required. Caius Julius Antiochus, a *manipularius* of the trireme "Virtus," stands surety (*fidejussor*); and the vendor acknowledges the receipt of the purchase-money and declares that he has handed over the boy according to terms. The deed is dated at Seleucia Pieria, a town lying on the Syrian coast just north of the mouth of the Orontes, in the winter quarters of the squadron of the Misenatian fleet there stationed, on the 9th kalends of June, in the consulship of Q. Servilius Pudens and A. Fufidius Pollio, =24th May, A.D. 166.

There are five subscriptions to the deed. First, Q. Julius Priscus, the vendor, acknowledges the sale and receipt of the purchase-money. Next, a *suboptio* of the trireme "Liber Pater," whose cognomen is unfortunately mutilated by the decay of the papyrus, but whose full name may have been C. Julius Titianus



(if we are right in our reading of the remains of the letters) subscribes on behalf of the surety (*fidejussor*), C. Julius Antiochus, who was ignorant of letters (*negavit se literas scire*). Then follow the signatures of three witnesses, viz. C. Arruntius Valens, *suboptio* of the trireme "Salus"; C. Julius Isidorus, centurion of the trireme "Providentia"; and C. Julius Demetrius, chief trumpeter of the trireme "Virtus."

At the foot of the deed and following the subscriptions is half a line of writing which is unfortunately so much mutilated by decay as to be illegible. It appears to have been in Greek, and was probably an official memorandum. Below this is the official note of the sale, in Greek, by an officer calling himself *μισθωτής*.

At the head of the deed the papyrus is unevenly folded down twice to a breadth of from half to three-quarters of an inch, and on this fold are seven clay seals, viz. those of the purchaser, vendor, surety, surety's amanuensis, and three witnesses, presumably placed in order. The impressions on them are: (1) a Victory, (2) a tree or shrub (?), (3) defaced, (4) a draped figure holding in the right hand an object which cannot be identified, (5) a lioness with inscription . . . ALA (?), (6) a capricorn, and (7) a Victory holding a wreath.

The following is a transcript of the deed :

- (1) *Caius Fabullius Macer*, *optio classis praetoriae Misenatium, triere* (2) *Tigride*, emit puerum, natione *Transfluminianum*, (3) nomine *Abban* quem *Eutythen* sive quo alio nomine (4) vocatur, annorum circiter septem, pretio denariorum (5) ducentorum et capitulario portitorio, de *Quinto Iulio* (6) *Prisco*, milite classis eiusdem et triere eadem; eum pue-(7)rum sanum esse ex edicto, et, si quis eum puerum (8) partemve quam eius evicerit, simplam pecuniam (9) sine denuntiatione recte dare stipulatus est *Fabul-* (10) *lius Macer*; spopondit *Quintus Iulius Priscus*; id fide sua (11) et auctoritate esse iussit *Caius Iulius Antiochus*, mani-(12) *pularius triere Virtute*.
- (13) *Eosque denarios ducentos*, qui *supra scripti* sunt, probos, recte (14) *numeratos*, accepisse et habere dixit *Quintus Iulius Priscus*, (15) *venditor*, a *Caio Fabullio Macro*, emptore; et tradedissee ei (16) *mancipium supra scriptum Eutythen* bonis condicionibus.
- (17) *Actum Seleucia Pieriae*, in castris in hibernis vexilla-(18) *tionis classis praetoriae Misenatium*, viiii kalendas Iunias, *Quinto Servilio* (19) *Pudente et Aulo Fufidio Pollione consulibus*.

- (20) *Quintus Iulius Priscus*, miles *triere* *Tigride*, vendedi *Caio Fabullio Macro*, optioni (21) *triere* eadem, puerum meum *Abbam* quem et *Eutythen*, et re-(22)cepi pretium denarios ducentos, ita ut *supra scriptum* est.
- (23) *Gaius Iulius Titianus* (?), suboptio *triere* *Libero Patre*, et ipse rogatus, pro *Gaio Iulio Antihoco*, manipulario *triere* *Virtute*, qui negavit se literas (24) scire, eum spondere, et fide suam et auctoritate esse *Abban* cuen ed *Eutythen* puerum, ed pretium eius denarios ducentos, (25) ita ut s. *supra scr[i]ptum* est.
- (26) *Gaius Arruntius Valens*, suboptio *triere* *Salute*, signavi.
- (27) *Gaius Iulius Isidorus*, centurio *triere* *Providentia*, signavi.
- (28) *Gaius Iulius Demetrius*, bucinator pri[n]cipalis *triere* *Virtute*, signavi.
- (29) . . . . .
- (30) Ετους δὸς α[ρτεμις]ίου δκ Δομετιος Γερμανο[ς μ]ισθωτης κυντα[νο]ς Μεισηνατων εκ . . . . κα (31) τη πρα[σει του παιδ]ειου Αββα του και Ευτυχου.

The transaction, then, as we have seen, takes place between two officers of the squadron of the fleet of Misenum stationed at Seleucia Pieria on the Syrian coast. It will be remembered that under Augustus a Mediterranean fleet was organized, having its two chief stations at Misenum on the Tyrrhenian Sea and at Ravenna on the Adriatic; and the two divisions bore respectively the titles of "Classis praetoria Misenensis (or Misenatium)," and "Classis praetoria Ravennas (or Ravennatium)." Being immediately under the command of the emperor, they, like the *cohortes praetoriae*, were also ranked as *praetoriae*. Other divisions of the Roman fleet were afterwards organized, as the Classis Forojulensis, the Classis Venetum, the Classis Britannica, the Classis Pontica, and others, among which was the Classis Syriaca, afterwards called the Classis Seleucena.\* The squadron, however, of the document before us is not to be confounded with this Classis Seleucena, which was under the command of the legatus of the province. It is a squadron of the fleet of Italy; and my friend Professor Mommsen (to whom I am indebted for much information in connection with this document) tells me that it is new and curious to find in the province a detachment of the imperial fleet which was not under the orders of the governor.

The ships of the squadron which are named in the deed are the "Tigris," the "Virtus," the "Liber Pater," the "Salus," and the "Providentia." Inscriptions referring to the Classis Misenensis are collected in vol. x. of the *Corpus Inscriptionum Latinarum*: and there the "Tigris" appears in Nos. 3400a, 3443,

\* Marquardt, *Röm. Staatsverwaltung*, ii. 485.

8210; the "Virtus" in No. 8208 (a trireme of the same name appearing also in the Ravenna fleet, No. 3645); the "Liber Pater" in Nos. 3535, 3540, 3563, 3579, 3595; the "Salus" in Nos. 3402, 3639, 8119; and the "Providentia" in No. 3636. The word *triremis*, it will be observed, is expressed in the deed by its symbol  $\overline{\text{III}}$  or  $\overline{\text{III}}$ ; and *centurio* by  $\text{J}$ .

Of the seven persons named, we have an *optio* and a *miles* of the "Tigris," a *manipularius* and the *bucinator principalis* of the "Virtus," a *suboptio* of the "Liber Pater," a *suboptio* of the "Salus," and a *centurio* of the "Providentia."

The *optio* originally was an officer chosen by the decurion or centurion as his assistant or adjutant in private matters. Smith<sup>a</sup> quotes Mommsen's opinion that there were two classes of *optiones*, one belonging to the centuries and superior in rank, the other in a manner supernumerary and outside the centuries and taking charge of particular departments, as the *navalia*, *carcer*, etc. *Optiones* of various triremes of the fleet of Misenum occur in the inscriptions.<sup>b</sup> Among them is an *optio* of the "Tigris," not our purchaser, but one M. Naerius Quadratus (No. 3400a). It may be noticed that the formula used is indifferently *optio triere* or *optio ex triere*. The *suboptio*, as the word implies, would be an officer subordinate to the *optio*. The title appears twice in the inscriptions.<sup>c</sup> *Miles* is a vague term which we find used by itself or with some explanatory title; but Mommsen observes<sup>d</sup> that it is rarely found in connection with *principalis*, and never with *optio* or *centurio*. The *bucinator principalis* occurs now for the first time; unless the title "Bix. Pri," which occurs in *C. I. L.* x. 3502, and which has been interpreted as *bixillarius principalis*, be another instance.

Only one of the names of the persons of our deed is found in the inscriptions connected with the Classis Misenensis, that of C. Arruntius Valens, who appears in two instances, Nos. 3464a and 3469, as *optio* of the liburnian "Nereis."

The child who is sold bears the native name of Abbas, with the alternative name of Eutyches, given to him no doubt by his captors: "quem Eutychen" in l. 3 should be "quem et Eutychen," as in l. 21, and in accordance with the formula common in Greek papyri, or "qui et Eutyches [vocatur]."<sup>e</sup> In conformity with the law,<sup>f</sup> his nationality is declared: "Transfluminianus," a term which is not

<sup>a</sup> *Dictionary of Greek and Roman Antiquities* (3rd ed. 1890), i. 801.

<sup>b</sup> *C. I. L.*, x. 3400—3479 *passim*, etc.

<sup>c</sup> *C. I. L.*, x. 3496, 3497.

<sup>d</sup> *C. I. L.*, x., Index, Officia Classiaria, p. 1131.

<sup>e</sup> Cf. *C. I. L.*, x., Index, Notabilia, p. 1187, *secundum nomen*.

<sup>f</sup> Dig. xxi. 1, 31, § 21. "Qui mancipia vendunt nationem cujusque in venditione pronuntiare debent."

found elsewhere. The river from beyond which the Arab boy had been brought would not be the Orontes, the river nearest to Seleucia Pieria and within the Roman province of Syria, but rather the great river, the Euphrates, which formed the eastern boundary.<sup>a</sup> Reckoning the legal value of the denarius at 9*d.*, the price of the boy would represent £7 10*s.* of English money; and the import dues might amount to a denarius and a half, if we may take as a standard a tariff of A.D. 202, found at Zarai, in Numidia, in which, under the head of *lex capitularis*, is the entry “*mancipia singula denario uno semisse.*”<sup>b</sup>

The edict of the Curule Ædile imposed upon the vendor the obligation of declaring any faults of which he might be cognizant in the slave whom he was selling, and of warranting the absence of certain faults, with or without stipulation on the part of the purchaser. If the slave turned out to be deficient in the warranted qualities or to have undeclared faults, the purchaser could bring under the civil law an action against the vendor called *duplae actio*, if, as was usually the practice, he had stipulated to recover double the purchase money, or an action *ex emto* for loss incurred. Or again, under the edict of the Ædile, he had the choice of two actions, the *actio redhibitoria* to cancel the sale and make good all losses, or the *actio quanti minoris* to recover part of the price.<sup>c</sup> In the present case the purchaser stipulates for the recovery of the amount of the purchase money (*simplam pecuniam*) only; not for double the sum, the usual penalty of the *stipulatio de evictione*. And he is to be exempt from giving the usual notice to the vendor of the claim of a third party: “*denuntiare de (or pro) evictione.*”<sup>d</sup>

A *verillatio classis praetoriae*, here named in the date-clause, appears to be mentioned in only one other instance, in an inscription: Orelli, *Inscriptionum Latinarum selectarum collectio*, ed. Henzen, iii. No. 6923.

With respect to the consuls named in this document, the praenomen of Fufidius Pollio is given elsewhere not as A[ulus], but as L[ucius]: *C. I. L.* vi.

<sup>a</sup> Cf. an inscription referring to χώραι [Σ]ομελοκεννησίας καὶ [ὑπ]εργλιματάνης, tractus Sumelocenensis (i.e. Rottenburg) et tractus superlimitanus, of the imperial period, given in *Westdeutsche Zeitschrift*, bd. v. (1886), korresp.-bl. 260.

<sup>b</sup> See Héron de Villefosse, *Rapport sur une Mission archéologique en Algérie*, in the *Archives des Missions scientifiques et littéraires*, 3rd series, tom. ii. (1875), 424; also *Soc. Française de Numismatique et d'Archéologie*, *Comptes rendus*, tom. vi. (1875), 184; and *C. I. L.* viii. 4508.

<sup>c</sup> Dig. xxi. 1, 1. Hunter, *Roman Law* (1885), 499; Rein, *Privatrecht der Römer* (1858), 710.

<sup>d</sup> Rein, *op. cit.*, p. 705. Cf. Dig. xxi. 1, 48; Rein, *op. cit.*, p. 706; Dig. xxi. 2, 49.

Nos. 165, 360; xiv. No. 4148; but Professor Mommsen tells me that the reading is not quite certain in the first two inscriptions.

It is unfortunate that the official memorandum of the *μισθωτής* at the foot of the document is in so imperfect a state. No part of it can be restored with certainty except the date, which is also given in the body of the deed; although I have had the benefit of my colleague Mr. F. G. Kenyon's skill in its attempted decipherment. The numerals *δσς* are to be read in reverse order, and indicate the year 274 of the era of the town of Seleucia, which was reckoned from B.C. 108.<sup>a</sup> This gives us A.D. 166. The name of the month is easily supplied, as the 24th of Artemisius, according to the Syrian reckoning, corresponds as it seems with the ixth kalends of June or 24th of May.<sup>b</sup> The system of arranging dates in reverse order appears to be Syrian; but there are one or two instances of the practice among the Greek papyri from the Serapeum of Memphis. The name of the *μισθωτής* is clearly Domitius Germanus; but what the title *μισθωτης κυντανος* (if our reading be correct) may mean, we have no means of deciding. The Latin equivalent may be *conductor quintanus*, and the official may have been the farmer of the duties levied on sales of this nature.<sup>c</sup>

A few words may be added regarding the handwriting of the deed and of its subscriptions. The forms of letters of the deed are those which we meet with in the *graffiti* or wall-inscriptions and in the waxen-tablets of Pompeii, and in the Dacian waxen-tablets of the second century; and they are written in a broad style and with great freedom. The more cursive forms, however, of the letters E (II), M (III), and N (III), which occur among the above-mentioned inscriptions, are not used in this document. The vendor's subscription is the painful performance of a very unready writer, and is made up of a series of capital and cursive letters. Next follows the attestation of the *suboptio*, who writes in the name of the illiterate surety in a cramped running hand, and employs certain forms of spelling, *cuen* for *quem*, and *ed* for *et*, which may indicate provincial pronunciation. The subscriptions of the three witnesses, which are fairly well written, do not call for remark, except the first, in which it will be seen that the letters VAL of the name Valens are written in a monogram, the V joining the L and incorporating the A below it.

<sup>a</sup> See Eckhel, *Doctrina Numorum Veterum*, iii. 327; Head, *Hist. Numorum*, 661.

<sup>b</sup> See Clinton, *Fasti Hellenici*, iii. 357-8, who concludes that at Antioch the month Artemisius coincided with May.

<sup>c</sup> A *μισθωτής* occurs in a document of A.D. 153-4, printed in Bruns, *Fontes Juris Romani Antiqui (Leges et Negotia)*, 1893, p. 324. Deeds of sale similar in nature to that which forms the subject of this paper will be found in that work, pp. 287, 322, *sqq.*



XXIV.—*Excavations on the site of the Roman city at Silchester, Hants, in 1894.*

*By* GEORGE E. FOX, *Esq.*, M.A., F.S.A.; *with Appendices on:* (1) *a hoard of Roman coins found at Silchester, by* H. A. GRUEBER, *Esq.*, F.S.A.; *and* (2) *hoards of Roman silver coins found in Britain, by* F. HAVERFIELD, *Esq.*, M.A., F.S.A.

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Read March 21st and March 28th, 1895.

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THE report which I have the honour to lay before the Society to-night on behalf of the Executive Committee of the Silchester Excavation Fund deals with the excavations carried on during the fifth year of the systematic exploration of the site.

If the past year's work be taken as a whole, it may be said that the discoveries made are of equal if not of greater importance than those of previous seasons, but they have been of a very different character. Although few houses have been found, and portions of the *insulæ* examined contain a large space of vacant ground, the buildings which line the south side of these *insulæ* are of exceptional interest, as they show us, for the first time in our examination of the site, considerable traces of some industry which covered a wide area in this north-western quarter of the town. What this industry was will be discussed later on.

Adopting the principle, whenever possible, of working along the main lines of roadway from the centre of the town to the gates, last year's explorations were planned so as to take in the *insulæ* lying in succession on the main street from *Insula* I. to the west gate. These have been numbered IX., X., and XI., a fourth, directly north of *Insula* X., being numbered XII.

The modern roadway traversing the site from east to west runs diagonally across *Insulæ* IX. and X., making for a break in the city wall, reaching which it turns southward, and continuing parallel to and within the wall, finally quits the town by the west gate.

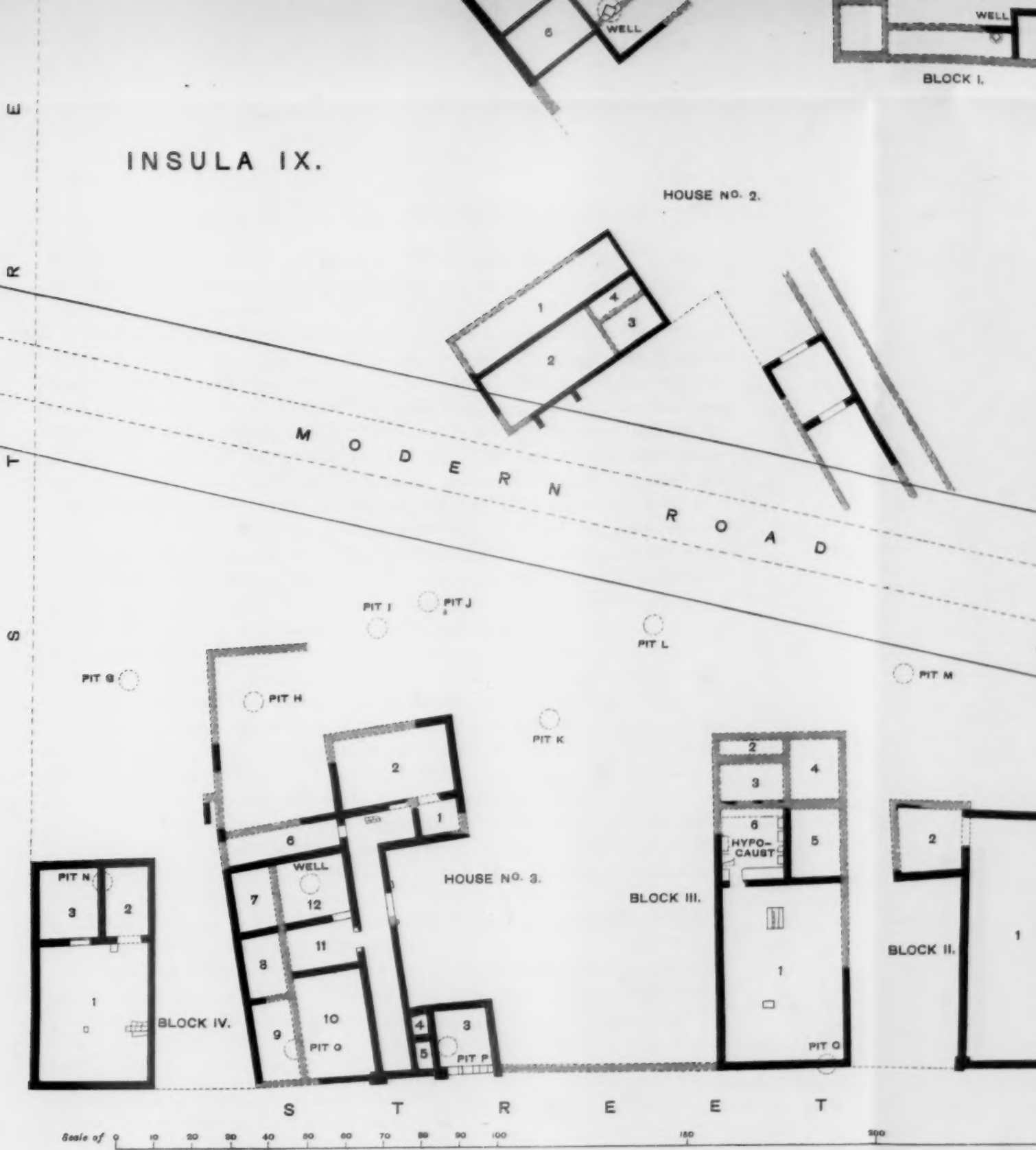


Taking the *insulæ* in their order from east to west for the purpose of a detailed examination, the first which presents itself is numbered IX. on the plan (Plate XLV.). It is situated at the intersection of the main roads or streets through the city, and forms a parallelogram 386 feet long by 274 feet wide, traversed as before stated by the modern road.

The upper and larger half, to the north of this road, was excavated in 1893, but with the exception of the stone with an Ogam inscription found in a well in House No. 1, of which a description was given in the report for that year, the discoveries made have not as yet been recorded. It was considered better to defer any account of them until the entire *insula* had been examined, and the excavation of what remained, *i.e.* the lower half, was the first work undertaken at the beginning of last season.

The disposition of the houses in this *insula* is singular. Hitherto, with small exceptions, the buildings in the various divisions of the town yet examined have been found to stand with their principal walls either lining the roadways or nearly at right angles to them. Here, all is different. The large House No. 1, near the north-east angle of the *insula*, was not only well within its boundaries but lay at an angle of 51 degrees with the line of the street on the north. House No. 2, south of No. 1, had the same irregularity of position, and House No. 3, at the south-west angle, though following a usual rule in respect to having one end upon a street, showed a marked inclination of its axis to the west.

House No. 1 belonged to the corridor type. It was of considerable size, having a length of 120 feet by a breadth of 44 feet. The central range of chambers had a uniform length of 21 feet 3 inches, with the exception of the last one at the southern end, which was 3 feet 5 inches less. The corridors which lined the range, back and front, were about equally wide, averaging 8 feet 3 inches. The north corridor was divided by a cross wall at 68 feet from the north-east angle of the house, and the south corridor terminated at its south-western end in a chamber, No. 6, having the same breadth as No. 5, the last chamber at this end of the central range. The wall at the west end of this corridor was prolonged for over 10 feet and then returned eastward as if to form a double corridor at this point, but at some 26 feet from the angle all further traces of it were lost. The western end wall of the house was also prolonged in a southerly direction, but could not be traced for any distance. This wall had an exceptional thickness of 2 feet 10 inches, the other walls of the building averaging only 1 foot 6 or 7 inches. It must be remarked that the walls of the



SILCHESTER. PLAN OF INSULA IX.

40 *Excavations on the site of the Roman city at Silchester, Hants, in 1894.*

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T

E

E

R

T

S

PIT 6

PIT N

3

S T R E E T

TESSELLATED  
FLOOR  
(Remains of)

WELL

PIT A

PIT B

HOUSE NO. 1.

1

2

PIT C

PIT D

PIT E

PIT F

4

5

6

WELL

WELL

BLOCK I.

INSULA IX.

HOUSE NO. 2.

1

2

4

3

M O D E R N  
R O A D

PIT I

PIT J

PIT L

PIT M

PIT H

PIT K

HOUSE NO. 3.

BLOCK III.

2

1

6

7

12

WELL

2

4

3

6

HYPO-CAUST

5

2



central range of chambers and those of the corridors were of equal thickness, an unusual feature, and possibly indicating the absence of an upper story to the house.

Taking the chambers in order, No. 1 showed throughout a flooring of *opus signinum*. Owing to its size it is likely that it was originally divided by one or more partitions. The next chamber, No. 2, had been floored with the usual red *tesserae*. The next, No. 3, was probably some kind of workshop. Its floor was covered with flint pitching, and two flint-lined shallow pits were sunk in the ground, one at each end of the space. No. 4 was an area of still larger dimensions than No. 1, and like it was in all probability originally divided into smaller compartments by lath and plaster partitions, all traces of which are now lost. No. 5 corresponded in breadth with No. 6, which has been already mentioned. Nearly parallel with the wall bounding Nos. 4 and 5 on the north ran a line of foundation, 1 foot 10 inches thick, separated from it by an interval 10 inches wide. It is possible that this foundation, taken together with rooms 5 and 6, the fragment of a corridor close by, and the thick western end wall of the house showing a prolongation southward, may indicate a later alteration.<sup>a</sup>

At the west end of the southern corridor, and beneath the line of its external wall, was found a shallow well of the usual construction, about 8 feet deep. In it, about 5 or 6 feet from the surface, lay, point downwards, the fragment of the sandstone pillar with the Ogam inscription treated of by Professor Rhys in his remarks appended to our report for 1893. The stone was so fully described in that report<sup>b</sup> that it is needless to do more than refer to it here. Beneath the stone, and completely flattened by it, lay a vessel of peculiar form, of white metal or pewter; but no other objects of interest were brought up, and it was evident that the well was disused and partly filled up when this vessel, and the *stele* which crushed it, had been flung into it. The well could only have been sunk when the portion of the house in which it occurred was in a ruinous condition, and probably somewhat late in the Roman period.

Between the north-east end of House No. 1 and the angle of the *insula*, a few traces of what may have been hypocausts were uncovered; as there was nothing to indicate that they had formed part of the dwelling, little can be said concerning them.

<sup>a</sup> The dimensions of the chambers of House No. 1 are as follow: 1, 21 feet 3 inches by 28 feet 8 inches; 2, the same by 13 feet; 3, the same by 15 feet 9 inches; 4, the same by 31 feet; 5, 17 feet 10 inches by 19 feet 6 inches; 6, 13 feet by 19 feet 6 inches.

<sup>b</sup> *Archæologia*, LIV. 233, where an illustration of it is given.



At a level with the lower end of House No. 1, and running into the *insula* at right angles to the main street north and south, was a curious little structure, Block I., consisting of two nearly square chambers joined by a long passage or corridor. The walls of the building were on an average 2 feet thick, the south wall of the western chamber being somewhat thicker, viz. 3 feet. In the corner of the passage, less than 3 feet from the west wall of the eastern chamber, was a small well of the usual timbered construction, and 1 foot 8 inches square. It is not possible at present to conjecture to what uses this singular building could have been put. Possibly further discoveries may throw some light upon the matter.<sup>a</sup>

Immediately south of House No. 1, and partly covered by the modern road, was House No. 2. What remains of it is but a fragment, and there are doubts if the building to the west of it, and nearly at right angles to the line of its chambers, be a part of it. As before mentioned, the house stood at a considerable angle with the side of the *insula*, and well within its eastern boundary. The portion remaining shows it to have been of the same type as House No. 1, but with only a single corridor on the eastern side of its range of chambers. This corridor could be traced for a length of 72 feet, and was 7 feet 5 inches wide. From a pit at its northern extremity came pieces of painted plaster, which showed that the house had been adorned with coloured stuccoes. All the floors, wherever they could be found, were of *opus signinum*. The depth of the chambers in the range had been uniformly 15 feet 4 inches, and the general thickness of the walls 1 foot 7 inches. Both corridor walls and range walls were of the same thickness, in this particular resembling those of House No. 1. The partition walls, however, of the only chamber remaining were somewhat thicker, viz. 1 foot 10 inches, as was also the southern half of the range wall next the corridor. The chamber, the dimensions of which were 16 feet 3 inches by 15 feet 4 inches, had a broad opening, 8 feet wide, in each partition wall, the openings being nearly opposite each other. Possibly the chamber formed a centre to apartments right and left of it, and in such sort would have served as the *tablinum* of the house.

A discovery of some interest was made in uncovering this chamber. When the western jamb of the southern opening was exposed the foundation was seen to contain two worked stones. These on being extracted proved to be the capital and base of a column from some earlier building used up again as building

<sup>a</sup> The following were the dimensions of Block I.: eastern chamber, 13 feet by 11 feet 3 inches; passage, 33 feet 4 inches long by 6 feet 6 inches wide; western chamber, 11 feet 3 inches by 12 feet.

material. The capital was much worn. A drum, probably a part of this column, had been found previously, also used in the same way. This is the second occasion when architectural remains of earlier houses have been found thus worked up, also in this quarter of the town, as Mr. Joyce discovered in House No. 1, *Insula* I., a fragment of a column incorporated in the walling. Both capital and base in the present instance, from their comparatively small dimensions, could only have come from domestic buildings. They are of good type, and may very likely have originally formed part of the structure of a house of the middle of the second century. At some period there seems to have been a good deal of destruction of the earlier houses in this part of the city, and they had never been rebuilt in the old way. The working up of early material and the irregular placing of the buildings in which such material has been found certainly point to considerable changes, the reason for which we can only guess.

Another object of interest found in this house was a fine slab of Purbeck marble, 3 feet long, 1 foot 11 $\frac{3}{4}$  inches wide, and 4 $\frac{3}{4}$  inches thick. Its surface was so perfect as to permit of its being repolished. At one end there is on each side the hole for a metal cramp or dowel,  $\frac{7}{8}$  inch square and 5 inches and 4 $\frac{1}{4}$  inches long respectively. Each terminates in a round hole, 2 inches in depth from the edge of the slab.

The building to the west, and nearly at right angles with the remains of the house just described, has been classed with it under the head of House No. 2. Though in fact it was a structure complete in itself, it was possibly a dependency of No. 2. It had a length of 51 feet 3 inches, with a breadth of 29 feet

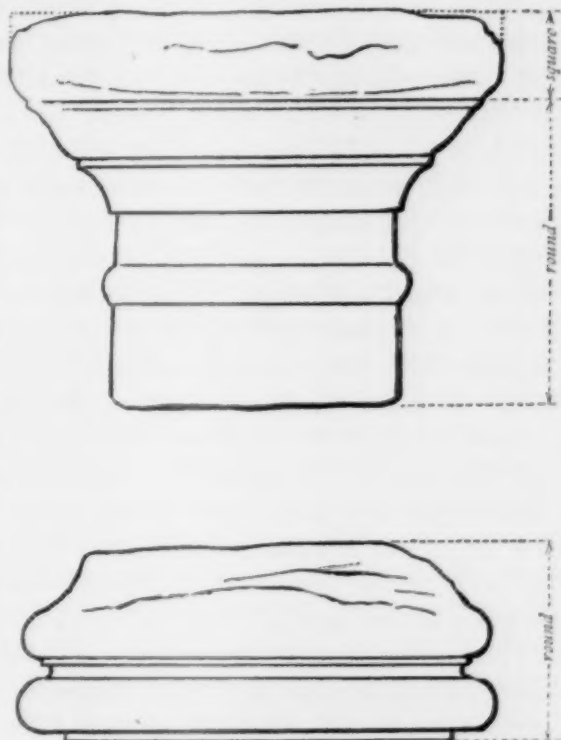


Fig. 1. Capital and base of a column found in *Insula* IX.  
( $\frac{1}{4}$  linear.)

7 inches, and the walls were 1 foot 6 or 7 inches thick. Internally it was divided longitudinally into two chambers, the first and narrower (No. 1) occupying the whole length of the building, the second (No. 2) having a portion parted off at its eastern end by a wall 13 inches thick. This portion was again divided longitudinally into two unequal spaces, No. 3 and No. 4.

The southern angle of this building runs beneath the hedge of the modern road. About 8 feet from the angle on the south side occurred a brick pier, projecting 3 feet from the wall and having a width of 1 foot 6 inches, and at a further distance of 10 feet 3 inches another similar one. These piers would seem to indicate a wide opening like a barn door between them. Probably the whole building was used for storage, or as stabling, as fragments of flint pitching were found at the east end of chamber No. 1. If the building had lofts, space No. 4 may have contained a stairway to them.<sup>a</sup>

Close to the northern boundary of the *insula*, and 72 feet from the north-west angle, a small patch of the usual tile *tesserae*, with scattered fragments of loose flint rubble, indicated the position of some building, and 34 feet still further east and close to the street a well may be seen marked upon the plan. This, though noted down as a well, might rather be called a circular pit. It was 17 feet deep and 5 feet in diameter, and in place of the usual boarding the sides were upheld at the bottom by rough stakes and wattling after the fashion of a rude kind of hurdle.<sup>b</sup> It seems possible from the character of the work that this hurdled pit may have belonged to an earlier time than the Roman occupation, though it might have remained in use during a part of that period.

Proceeding now to the part of the *insula* south of the modern road, House No. 3 claims our attention. This house is complete, and shows no alteration in its plan, but, as before stated, it was irregularly placed with reference to the boundaries of the *insula*. The south end, situated upon the main roadway or street of the city running east and west, actually encroaches, at its western angle, upon that street as much as 3 feet 6 inches beyond the general line, and the axis of the house is canted over considerably to the west. The house is of the corridor type, with a large annexe at the northern and a smaller one at the southern end. The main portion measured 68 feet in length and 43 feet in breadth. The

<sup>a</sup> The dimensions of the various chambers in this building are: for No. 1, 48 feet 3 inches by 10 feet 3 inches; No. 2, 33 feet by 14 feet 7 inches; No. 3, 13 feet 10 inches by 8 feet 7 inches; No. 4, the same by 4 feet 7 inches.

<sup>b</sup> A well of similar construction was found in Leicester in 1860. See *Proceedings of the Society of Antiquaries of London*, 2nd Series, i. 245, where a woodcut of it is given.

corridor serving its various rooms lay on its eastern side, and was 7 feet 6 inches wide. It had originally been paved with brick. It was returned at the northern end for a length of 24 feet in an easterly direction, the last 14 feet being cut off by a wall to form a small room (No. 1). Attached to the northern wall of this returned corridor was a large chamber with a cemented floor (No. 2); there may have been an entrance from it into room No. 1. At the southern end of the main corridor, lying upon the street, was a partly detached chamber (No. 3), which in its position very much resembled a similar one in House No. 3, *Insula VII*. It was in all probability a shop fronting the street. Its walls were parallel with those of the house to which it belonged, and consequently did not stand at right angles with the roadway; the chamber was therefore somewhat irregular in shape. Between the western wall of the shop and that of the corridor was an interval of about 4 feet, divided into two compartments (Nos. 4 and 5) by a thick mass of chalk rubble. It is difficult to make out how this chamber (No. 3) was entered, except from the street, as there were no signs of any communication between it and the house. Be this as it may, the room or shop as it seemed to be had some pretensions to display, for the walls had been plastered and elaborately decorated with painted ornaments. Some of the painted plaster remained round the walls, while many fragments were found on the floor. These fragments showed grounds of yellow, red, and blue, with traces of lines and ornaments upon them, and painted imitations of a marble, apparently a brecchia, exhibiting large circular spots of yellow upon a red ground.

The side walls of this shop, which were largely composed of chalk, were finished by piers, the brick footings of which projected something over a foot upon the roadway, the eastern being 2 feet, while the western was 3 feet wide. Another brick footing, 12 feet 6 inches west of the latter, was even larger, having a breadth of 4 feet 6 inches. The full width of the interval between the first and second was 12 feet, and was occupied by a layer of tiles based on a rubble foundation 2 feet wide. In this layer are three breaks, at fairly regular intervals, indicating apparently the posts of a shop front of much the same construction as those of medieval date. If this surmise be correct, the tiles would have been carried up to a convenient height to form a counter between and in front of two of the posts in two of the openings, while the third interval would have been left vacant to form a doorway.

In a pit under the cemented floor of this chamber was found a portion of a large quern and some perfect vessels of pottery, and in the loose earth from near the eastern wall a fragment of foreign marble and pieces of cakes of the same

kind of metallic substance which was discovered in House No. 4, *Insula VIII*. Further specimens of this substance were turned up also at the angle of the eastern and northern corridors.

The body of the house consisted of a range of three chambers all of equal depth, viz. 17 feet 6 inches, backed by a second range of the same number of divisions, all 10 feet deep, this second range being in fact a wide corridor divided into three chambers of unequal breadth by cross walls. The average thickness of the walls throughout the house was 2 feet, with the exception of that of the east corridor, which was 1 foot 8 inches thick. At the northern end of the house was a long passage (No. 6) with a doorway, 3 feet wide, into the corridor, and there was doubtless another at the opposite end. If there was an upper floor to the house the staircase probably occupied a portion of this passage.

It should be noted that the arrangement of the external doorways of this house differed somewhat from those of other dwellings of similar plan already found on the site. The principal entrance was not upon the street at the end of the main corridor, where it might have been looked for, but it was placed in its eastern wall about 8 feet from the northern angle. At this point is a block of stone 21 inches wide, projecting 8 inches from the wall; and at a further distance south of it of 8 feet 6 inches in another of somewhat smaller dimensions (viz. 8 inches by 12 inches) also against the wall. It is clear that between these stones was the main entrance to the house from the courtyard in front of it, and not directly from the street. From the north-west corner of the house, where as mentioned there was probably a doorway, a long wall at an obtuse angle extended northward for a distance of 40 feet, when it returned eastward for 26 feet and was then lost. It was merely the wall of an enclosure. Not far from the doorway, and north of it, was a rubble foundation forming a projection in the shape of a reversed L from this enclosure wall.

But to return to the internal arrangements of the house. Chambers Nos. 7, 8, and 9 do not require description. No. 10, however, is of larger dimensions and of more importance. It may have been the *triclinium*. No. 11 has the appearance of a large lobby or passage-room to the various divisions of the house. It had a well-defined doorway 4 feet 3 inches wide, with brown sandstone bases to the jambs communicating with the main corridor, and another 4 feet 9 inches wide led into chamber No. 12. This chamber had undergone considerable changes of destination. As found, it had a floor of very well laid *opus signinum* of excellent quality, and from fragments of plaster that were turned up, the walls must have been brilliantly painted in panels of yellow and red; it was therefore



probably the *tablinum* of the house. A depression, however, in the centre of the floor showed, when it came to be dug out, that whatever might have been the later use of the room, the earlier use was that of a kitchen, for beneath the perfectly laid floor of *opus signinum*,  $2\frac{1}{2}$  inches thick, was a second, 5 inches thick, of coarser material, and under the depression was a well 18 feet deep. The construction of the well was peculiar. For a depth of 13 feet from the original floor of the chamber it had been lined with flint. All the upper half of this lining had fallen in or been removed, but the lower portion remained in part. This was circular, with a diameter of 3 feet 6 inches; then for the rest of the distance there was a lining of wooden staves, 5 feet long and slightly bowed outwards, in fact forming a large barrel. The staves rested on a wooden curb, 2 feet 4 inches square, the timbers of which had a thickness of  $2\frac{1}{2}$  inches and a width of 10 inches, and were dovetailed into each other. The staves were on the average 6 inches wide and  $1\frac{1}{2}$  inch thick, and were nineteen in number. On one side of this cask was a bung-hole  $2\frac{1}{2}$  inches in diameter and 1 foot 11 inches from the bottom. When the well was cleared out, the water came in through this aperture very freely, and rendered our examination difficult. The woodwork or barrel was well pugged behind with clay, and on this the flint lining partly rested; the bottom beneath the curb was also of the same substance.

Examination showed that the well was filled down to the level of the woodwork with the wreck of the flint lining, in which mass of rubbish only two fragments of pottery were found, both of small vessels of pseudo-Samian ware bearing respectively the potters' marks *VERVSF* and *DITANIM*. Beneath this, from the wooden barrel, a quantity of black slush was emptied out. In it lay the remains of the bucket; a few fragments of coarse black and buff pottery with one shard showing a purplish glaze; three nails and the head of a javelin; a small flat top of a vessel of bronze which had been thickly gilt; pieces of leather soles of shoes of two sizes; two oyster-shells and a few bones of oxen and sheep. From the blackness of the mud filling the barrel, and from the condition of the iron remains, it is probable that the well before it was filled up and floored over had been used as a latrine and receptacle for rubbish, but not for long, as the fragments found were but scanty when compared with the contents of pits elsewhere, used for a similar purpose.

The discovery of this well was a most interesting one, because it revealed with exactness the precise method of construction employed in all the wells on the site. Whenever these wells have been dug out, it has been observed that quantities of loose flints have first to be removed before reaching the boarding



with which they are invariably lined for part of their depth. Looking to this example, it is now clear that they were, in the upper part, lined with flint, and boarded only in the lower portion, and it seems probable that the boarding was only carried up from the bottom to a height beyond which it was believed the water would not rise.

With this discovery the exploration of House No. 3 was concluded, and we will now pass on to the consideration of other remains.<sup>a</sup>

At the south-east corner of the *insula* occurred a large rectangular enclosure, Block II., the eastern side of which lay along the main street running through the city from north to south. Its southern end faced the main street leading to the west gate. It was 66 feet long by 29 feet 6 inches wide, with fine brick quoins at the southern angles; the walls were over 2 feet in thickness. Attached to its north-west corner was a smaller enclosed space, not quite rectangular, measuring 20 feet each way. No flooring was discovered in either space. At 28 feet west of the larger enclosure another (Block III.) showed itself. Like its neighbour, it had good brick quoins, and abutted on the main street. Its length was 86 feet and its breadth 35 feet; its walls averaged 2 feet in thickness, and there were traces of a wall of the same thickness along the street joining it to House No. 3. The block was divided into two unequal portions, the southern forming a large and undivided area (No. 1), the northern showing five compartments of varying size. This northern division may have been the remains of a small house, and, if so, what appears as a passage (No. 2) probably contained the stair to an upper floor. Of chambers Nos. 3, 4, and 5 nothing can be said. No. 6 had been a large room warmed by a composite hypocaust, in which the pit for the *pila* was surrounded by unusually narrow banks of rubble next the walls, through which passed the passages to the wall flues. The furnace passage was in the south wall of the chamber at the north-west corner of the enclosure No. 1. From the disposition of this furnace passage and the arrangement of the wall flues it seems certain that the room was entered from chamber No. 3.

A question arises as to whether the large area No. 1 was ever roofed over.

<sup>a</sup> The following are the dimensions of the various chambers of House No. 3: No. 1, 8 feet 1 inch by 10 feet; No. 2, 17 feet 8 inches by 29 feet 7 inches; No. 3, 14 feet 9 inches by 13 feet 7 inches; No. 4, 3 feet 11 inches by 4 feet 9 inches; No. 5, the same by 6 feet 11 inches; No. 6 (passage), 6 feet 10 inches by 29 feet 6 inches; No. 7, 10 feet by 15 feet 3 inches; No. 8, the same by 15 feet 6 inches; No. 9, the same by 20 feet 5 inches; No. 10, 17 feet 6 inches by 26 feet 8 inches; No. 11, the same by 10 feet 8 inches; No. 12, the same by 15 feet.

If it were, there must have been posts so disposed as to support the roof. Perhaps a large block of sandstone near the southern end may be one of a line of similar blocks on which such posts would certainly be raised.

Near the southern end is a rectangular bed of tiles with a base of a flue down the middle. It lay north and south, and was about 5 feet long by 4 feet wide. The probable use of this and the area in which it is placed will be discussed presently.<sup>a</sup>

The last building (Block IV.) to be described in *Insula IX.* lay at the south-west angle, one of its sides and its southern end lining the streets bounding the *insula*, as in the corresponding block at the south-east angle. North and south it had a length of 59 feet, with a breadth of 32 feet 10 inches.<sup>b</sup> In places a considerable quantity of ironstone was worked up in the walls.

The enclosure was divided in a similar way to Block III., having a large area upon the street, with two chambers behind it of unequal size. Here, again, blocks of stone (ironstone in this instance) were found, which may have been used as bases to posts supporting a roof to the area. One was lying loose in the enclosure, another was attached to the north wall near the east side. A patch of flint rubble occurred also in the centre, but it is doubtful whether it could have had anything to do with supports to the roof.

At 12 feet from the street, against the east wall, and at right angles to it, lay a mass of roof tiles with a central flue. It was 6 feet long, and there was no sign that the flue had any outlet through the wall. The fragment resembled the one found in Block III., except that it abutted against a wall instead of being in the open ground, and that it lay east and west instead of north and south. The bed of this flue lay about 1 foot 6 inches beneath the level of the tessellated tile floor of No. 2, the smaller of the two chambers at the north end of the block. Since that floor represented the general ground level, it follows that the flue was beneath it; a fact to be borne in mind when dealing with similar remains found in the other *insulæ*.

There was a doorway in room No. 2 communicating with the area (No. 1), and a pit lay under the wall separating the two chambers. Chamber No. 3 also had a

<sup>a</sup> Dimensions of chambers in Block III.: No. 1 (area), 45 feet by 31 feet 2 inches; No. 2 (passage), 16 feet 7 inches by 3 feet 7 inches; No. 3, the same by 9 feet 4 inches; No. 4, 12 feet 9 inches by 15 feet 7 inches; No. 5, the same by 17 feet 6 inches; No. 6, 18 feet 1 inch by 16 feet 3 inches.

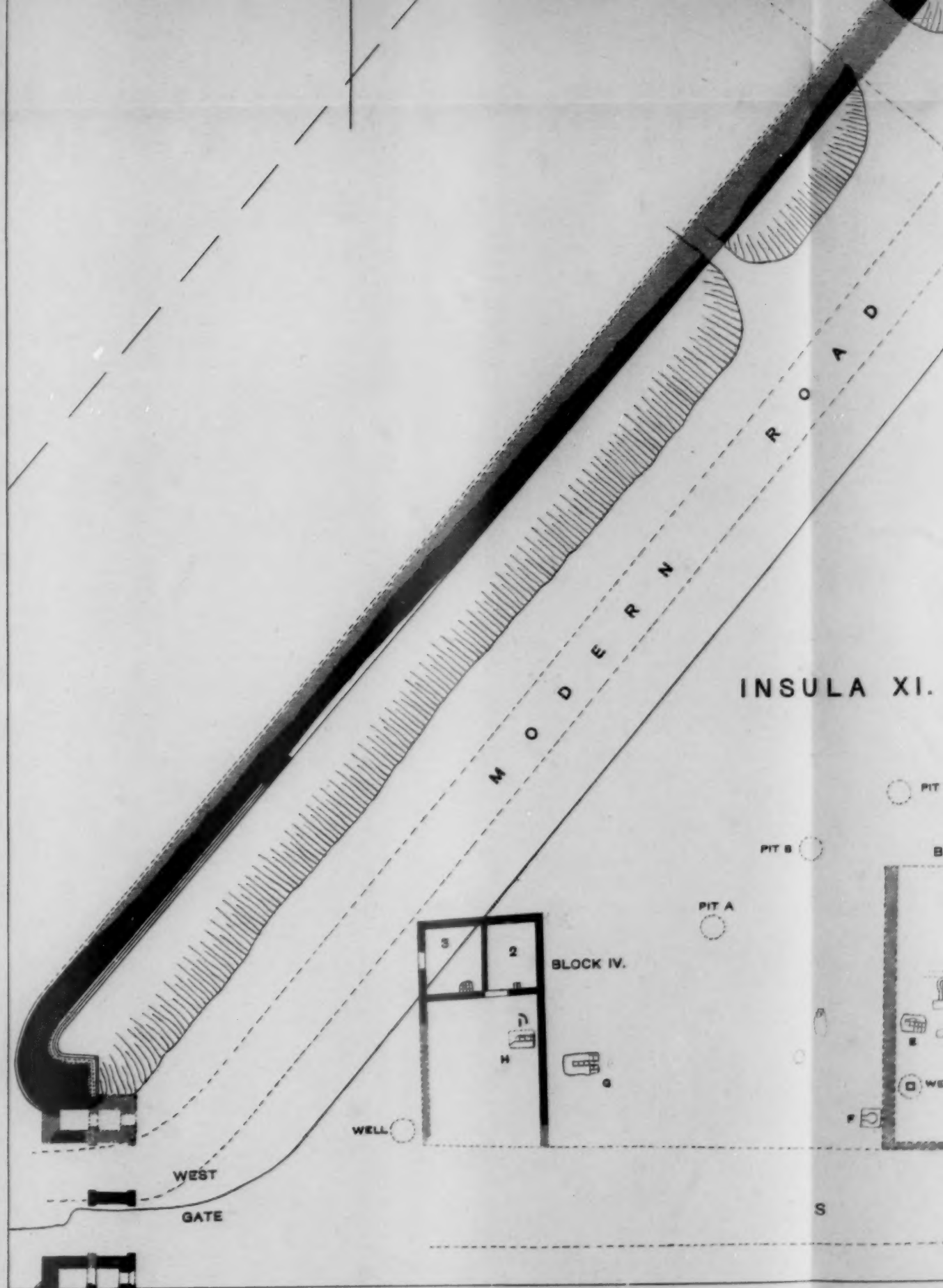
<sup>b</sup> Its north, south, and west walls averaged 2 feet 3 inches in thickness, the remaining one being only 1 foot 8 inches thick.

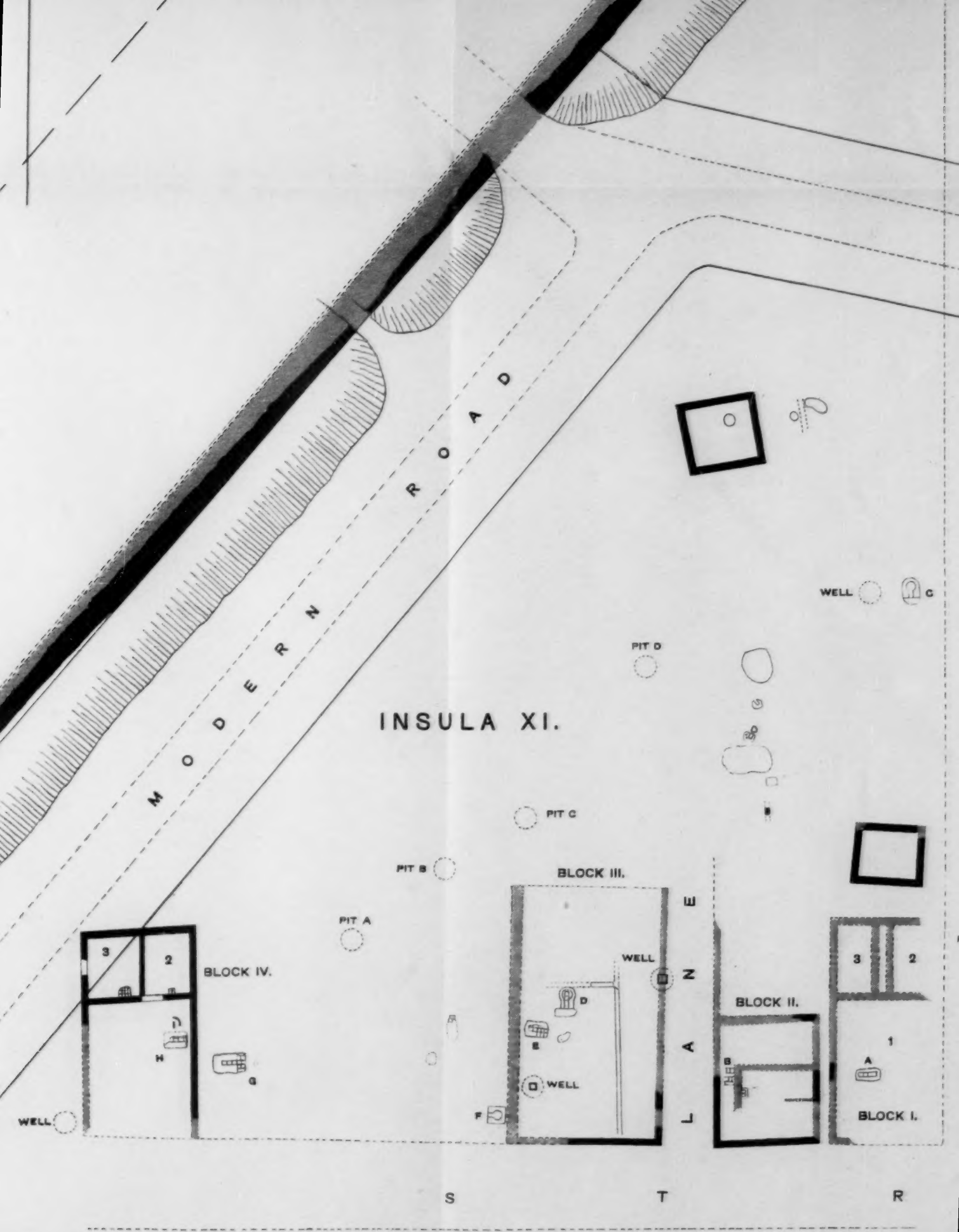
doorway 5 feet 3 inches wide, with a tile sill, from the area. Neither in the area nor in the latter chamber were there any traces of flooring.\*

*Insula X.* was of the same length (386 feet) as *Insula IX.*, but was 10 feet wider, or 284 feet in all. (See plan, Plate XLVI.) The modern road crosses it diagonally, separating it into two almost equal parts. It was divided from the surrounding *insulæ* on the north, east, and west by streets or roadways having an average breadth of 18 feet. On the south, the main street east and west through the city formed its boundary, and was there from 23 to 25 feet wide. It is only directly upon and along this street (with but two or three exceptions) that remains of buildings were found. These were certainly not houses, and there is strong reason for believing that they were workshops and storerooms. Five out of the six whose traces can be made out in this *insula* had, with trifling modifications, the same plan as Block IV., *Insula IX.*; in fact, that block may be taken as the type of the buildings in all the *insulæ* under consideration, consisting of a large area with two chambers in or attached to its northern end. Block I., at the south-east angle of the *insula*, was 60 feet long by 37 feet 6 inches wide, with walls 2 feet thick. Of the chambers at the northern end only a portion of the wall dividing them from the area remained; all else had been swept away. Penetrating the west wall of the area at 19 feet from the south-west angle were the tiles of a flue (A) similar to those noted in Blocks III. and IV. of *Insula IX.*, and at 6 feet further north a rubbish pit occurred underlying the same wall. At the northern end of the area, close to the remains of the party wall, lay a circular furnace (B). It was sunk in the ground, its tile floor being 2 feet 9 inches below the level of the neighbouring street. Its diameter was 2 feet 4 inches, and the sides were roughly built of broken tile, three courses of which remained, the middle one being laid in herring-bone fashion. Clay had been used as mortar, and was burnt to redness by the heat of the fires, which had also turned the tile floor of the furnace to an ashy grey. Near by, in fact undermining the chamber wall, was a large hole or ash-pit completely filled with fine charcoal dust, the refuse of the fires.

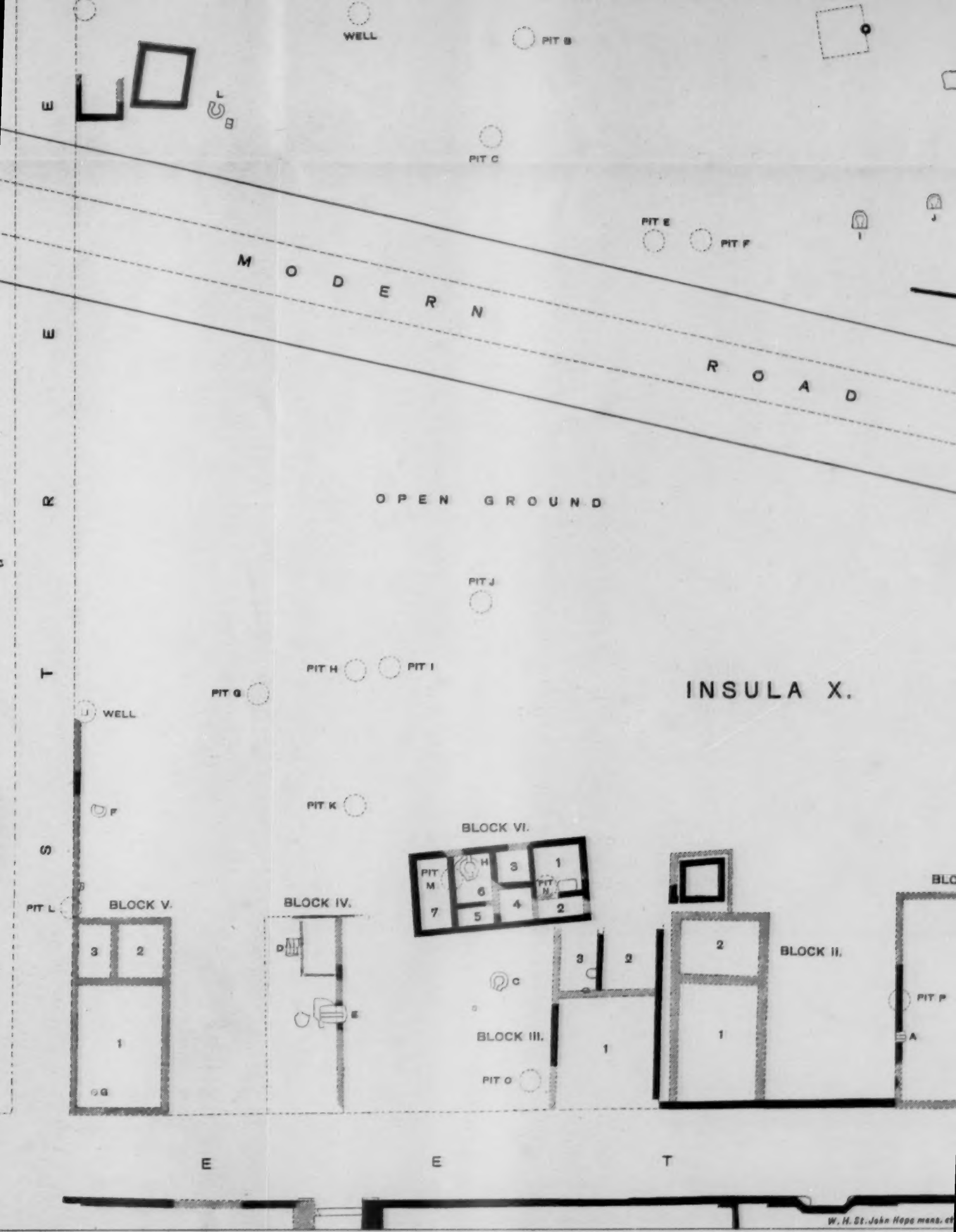
From the south-west angle of Block I. a wall bordered the street, and towards its western extremity formed the southern limit of Block II., of which nothing remained but the gravel foundations of its walls. These showed an enclosure

\* The dimensions of the various divisions of Block IV. are as under: No. 1 (area), 34 feet 10 inches by 23 feet 6 inches. Chambers: No. 2, 17 feet 9 inches by 11 feet 1 inch; No. 3, the same by 15 feet 3 inches.

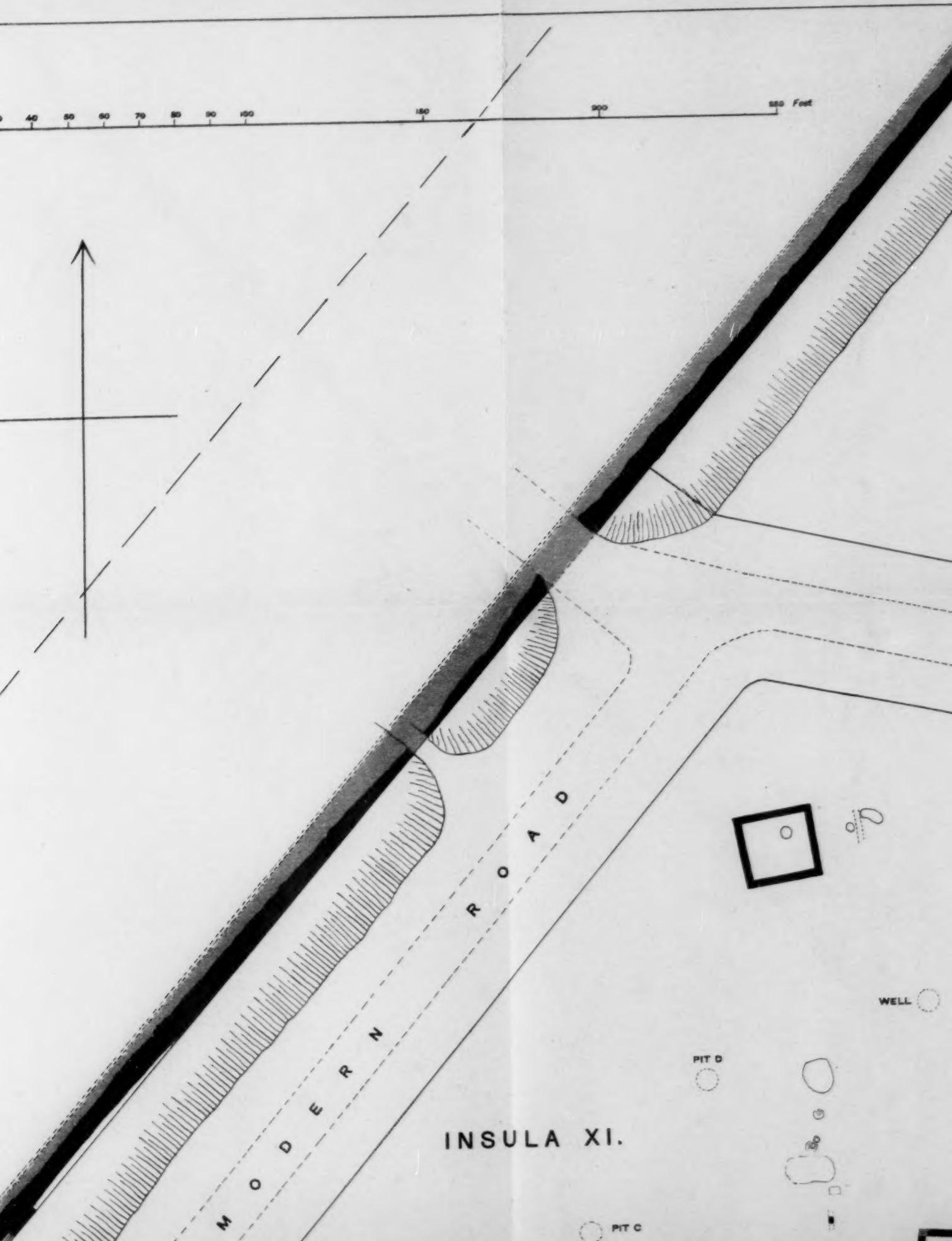












INSULA XI.

S T R E E T

OPEN GROUND

INSULA X.

PIT D

T

PIT A

WELL

PIT B



E



L  
B

PIT C

PIT E

PIT F



M O D E R N

R O A D

E

OPEN GROUND

PIT J

PIT H PIT I

INSULA X.

T

PIT G

WELL

PIT K

c



54 feet 3 inches long by 27 feet 7 inches wide. At the northern end a transverse line of foundations indicated the limit of the chambers, but the space thus marked off had not the usual division into two compartments. Possibly a partition had formerly existed, but of it we could find no trace. At a distance of only 2 feet 10 inches from the north end of the block, and towards its western side, lay a chamber imperfectly rectangular, which measured 13 feet 7 inches by 10 feet 4 inches. Nothing remained of its walls but the gravel foundations, 2 feet thick; on the east side these were prolonged to touch the wall of the block. Within this chamber or enclosure was a second, the walls of which were 2 feet in thickness, with brick quoins. They lined the foundations of the larger one on the north and east sides, were within 8 inches of them (on an average) on the west, and were rebuilt upon them on the south side. It is by no means easy to guess what these constructions were. Mr. Hope suggests that the inner enclosure may have been a tank. There were, however, no remains of plastering with which tanks were generally lined, but still such a use of the enclosed space is not impossible.

Block III. was in close proximity to Block II., being separated from it by an interval of less than 3 feet. The north and south walls had been completely removed. The length of the block was about 50 feet, its width 31 feet.<sup>a</sup> The two chambers at the northern end could be made out, the eastern was the wider of the two. In the western was a doubtful trace, against the partition wall, of a circular furnace similar to that in Block I.

A space of open ground 20 yards in width occurs between Block III. and the next to the west, Block IV. In this open ground, 16 feet from the west wall of Block III., and 33 feet from the street, another circular furnace (C) was uncovered. It was like that already described as found in Block I., but in this case of larger size, and not sunk below the surface level. Nothing but the mere base of it remained with the first course of tiles forming its sides, the indication of the opening, and the much calcined hearth.

Block IV. is a mere wreck. The east wall only could be traced, showing a length of 55 feet, at the end of which were faint indications of the northern wall. There were also lines of flint showing the limits of one of the chambers at the north end. The rest of the structure had entirely perished. There are nevertheless two noticeable fragments in this block. Close to, and on the west side of the line of flints indicating the partition wall of the one chamber still to be

<sup>a</sup> The walls were 1 foot 10 inches thick.

traced, is a patch of tiling (D) showing the signs of a flue at right angles to the wall, with the start of another parallel to the same wall. But similar remains in the area of the block are still more noteworthy. At 25 feet from the main street, lying against and at right angles to the eastern wall, a mass of brickwork (E) was uncovered, 5 feet across and projecting 4 feet 6 inches into the area. It was composed, for the most part, of rudely built up layers of broken roof tiles laid with wide joints, with clay for mortar. In this mass of brickwork were the remains of a flue, its eastern end passing through the wall and its western one terminating in stone jambs, of which one remained to a height of a foot. The flue was  $10\frac{1}{2}$  inches wide, its sides stood to a height of 8 inches, and the bottom was laid with roof tiles, fairly perfect and much burnt. The western end of the mass of brickwork, where the stone jambs were placed, was much ruined, but there seemed some indication of a cross flue at right angles to the one described. (See Plate XLVII., Fig. 1.) What appeared to be one floor tile of this cross flue remained about 2 feet north of the flue opening. It lay at the same level as the bottom of the flue, and was much burnt, a sure sign of its having been part of such a floor lining. The whole mass of brickwork had sunk inwards from the wall. It was based on a thick bed of burnt clay, and at 1 foot 3 inches beneath the level of the flue, and under this bed, lay fragments of a rough tile pavement. The bed of burnt matter could be traced here and there throughout the whole block, but more especially towards the southern end.

The next and last block on the line of the street, Block V., was situated at the south-west angle of the *insula*. Although nothing but the gravel foundations of its walls remained, its dimensions could be perfectly made out. It had a length of 55 feet with a breadth of 27 feet 8 inches, and exhibited the usual arrangement of an area and two chambers. Its western wall, which lined the end of the street dividing *Insula X.* from *Insula XI.*, could be traced northwards from its north-western angle for a length of 53 feet, at which point it was interrupted by a well which had been sunk close upon the street. This well was 16 feet deep from the present surface. Its wood lining remained to a height of 8 feet 4 inches from the bottom and was 2 feet 6 inches square. No trace of the wall could be found north of this well. At a point half-way between the well and Block V., and a few feet east of the wall, occurred the remains of a circular furnace (F), and at the north-west corner of the block, quite in the street, was a rubbish pit.

The interesting discovery was made in Block V. of a quern (G), which was





1. FLUE IN BLOCK IV, INSULA X.

*From a photograph.*



*George E. Fox del., 1894.*

2. FURNACE IN BLOCK III, INSULA XI.





found *in situ* at the south-west corner of the area (No. 1). It was of the usual form found on the site, viz. a flattened cylinder of no great thickness. It was 3 inches thick in the centre and  $1\frac{1}{2}$  inch thick at the edge, and measured  $17\frac{1}{2}$  inches in diameter. It was fixed upon a circular base of the same diameter, of imperfectly burnt brick, 2 inches high. The floor beneath it appeared to be of burnt clay. The upper stone had been broken but the pieces lay near. Strewn around were fragments of charred boarding and charcoal as if part of a burning roof had fallen upon it.

Block VI. now claims attention. It has been left until the last in this description since it differs both in position and arrangement from the others, being placed mainly in a parallel direction with the main street at some 50 feet from it, and having its axis east and west, whereas in all the other blocks the axis lies north and south. Its eastern end overpassed the north-west angle of Block III. by about 11 feet. It was 50 feet long by 23 feet wide, and was cut up into four unequal spaces by party walls. Three out of four of these divisions were each subdivided unequally, and thus the whole building was parted into seven chambers of varying size. No. 1 showed traces of a tile floor, and amongst the rubbish the stones of two querns were turned up. A shallow rubbish pit occurred in the south-west corner. Chamber No. 7 may also have had a tile floor, and another rubbish pit lay under the partition wall between it and the adjoining room (No. 6). This latter chamber contained the base of a circular furnace (H), close to the northern wall. As further reference will be made to this singular building we may pass on now to other matters.

Between the row of buildings spoken of as bordering the southern end of the *insula*, and the modern road which crossed it, extended a considerable space of ground in which no constructions could be detected, but in which a certain number of rubbish pits were to be found. The rest of the *insula* to the north of the modern road had also rubbish pits scattered over it, and on the eastern side remains of circular furnaces (I, J, K) with what looked like the fallen tile roof of a shed or wooden building, 13 feet square. On the eastern side of this structure was a small shallow well or pit lined with flint.

On the western side of the *insula*, where the modern roadway crosses the line of the ancient street, were the remains of a chamber floored with tile *tesserae*; and close to its eastern wall, at an interval of only 3 feet, the perfect foundations of another, roughly square in form, 14 feet by 12 feet 4 inches, and with walls 1 foot 7 inches thick. The last to be mentioned of the circular furnaces (L)

occurring in this *insula* was found at 6 feet from the south-east corner of this chamber.<sup>a</sup>

We now come to *Insula* XI., which is triangular in shape. (See plan, Plate XLVI.) It is divided from *Insula* X. by a street on its eastern side. It is bounded on the south by the main street through the city, and has the western gate at its south-western angle. This side was 356 feet long. On the third and longest side the city wall running north-east and south-west formed the boundary, and measured along the foot of the mound was 486 feet in length. The modern roadway occupies a considerable strip of the *insula* within the city wall.

As in *Insula* X., the buildings, with slight exceptions, lay along the main street, and were of the same character. Block I., at the south-east angle, had the same plan as that of the majority of the blocks already noted, viz. an area upon the street backed by two chambers of unequal size, but with this difference, that the two chambers were divided by a space 2 feet wide. This may have been somewhat wider when the walls were erect, and probably contained a rough stair to lofts over the chambers. The east wall of the block had disappeared, but the general dimensions could be made out. The block was 61 feet 9 inches by 31 feet 8 inches. In the area, 17 feet from the street and parallel to it, was a fragment of a long flue (A) similar to those observed in the blocks in *Insula* X. About it was much wood ash, and the whole surface of the area, wherever examined, showed a surface of burnt matter. From the excavations here was turned up another of those round saucer-shaped cakes of metallic substance of the same nature as those found in House No. 3, *Insula* IX., and elsewhere.

At a distance of 9 feet north of Block I. lay a detached quadrangular chamber with foundations largely constructed of ironstone.

Block II., in close contiguity to Block I., there being only an interval of 3 feet

<sup>a</sup> The dimensions of the various blocks in *Insula* X. are here appended :

Block I. Area 40 feet by 33 feet 6 inches. Depth of chambers 15 feet 1 inch.

Block II. No. 1 (area), 32 feet 9 inches by 27 feet 7 inches. Undivided space at north end. No. 2, 15 feet 1 inch by 27 feet 7 inches.

Block III. No. 1 (area), 29 feet 6 inches by 31 feet. Chambers : No. 2, 16 feet 9 inches (?) by 15 feet 2 inches ; No. 3, the same by 10 feet 5 inches.

Block IV. Area 35 feet (?) by 20 feet 2 inches (?). Chamber 15 feet by 8 feet 6 inches (?).

Block V. No. 1 (area), 34 feet 1 inch by 23 feet 10 inches. Chambers : No. 2, 14 feet 10 inches by 12 feet 9 inches ; No. 3, the same by 9 feet 3 inches.

Block VI. No. 1, 13 feet 1 inch by 12 feet 8 inches ; No. 2, the same by 5 feet 3 inches ; No. 3, 9 feet 2 inches by 8 feet 8 inches ; No. 4, the same by 9 feet ; No. 5, 10 feet 2 inches by 5 feet ; No. 6, the same by 13 feet 2 inches ; No. 7, 19 feet 7 inches by 8 feet 8 inches.

between them, breaks by its different form the line of buildings, all of similar plan hitherto described. It measured 36 feet in length by 26 feet 5 inches in breadth. There were no signs of chambers; it consisted simply of a large area, within which were traces of walls enclosing a somewhat smaller area on the eastern side. This again seems to have had some internal partition, but nothing can be clearly made out. Against the foundation of the north-west angle of the inner area were two fragments of flues (B), whose direction was parallel to the main road.

The west wall of Block II., with a continuation of it northward, and the east wall of Block III., formed the boundaries of a lane 14 feet 6 inches wide which ran up towards an isolated square chamber situated near the bend of the modern road. This chamber, which may have had a doorway at its north-west corner, showed traces of a much burnt floor as of clay reddened by heat. Among the fallen rubbish of the walls, at the opposite angle to the door, was found a sword blade and some fragments of iron.

Half-way between this building and Block II. two patches of burnt material are to be seen indicated on the plan, perhaps the remains of floors, or flues, or furnaces, and near them a small piece of walling. A similar but larger piece was uncovered to the east of the square building, having on one side of it some flint pitching and on the other part of a cement floor. These faint indications of some structure and the lane close by may possibly point to the existence of a house on this spot at an early period, to which the square chamber may have belonged. The suggestion is given here for what it may be worth.

Not far from these burnt patches there was found in the earth on the side of a pit (D), but not in the pit, between 3 and 4 feet below the present surface of the soil, a black vase filled with silver *denarii*. They were 253 in number, and ranged from Marc Antony to Septimius Severus, early in whose reign the treasure was probably buried. These coins were mostly much worn. Being of silver they were promptly claimed by the Treasury as "treasure trove," but after deduction of thirty-nine specimens which were not represented in the national collection in the British Museum, the rest of the hoard was given back, and will form part of the Silchester collection at Reading.\*

Near the street dividing *Insula* X. from *Insula* XI., at 150 feet from the south-east corner of the latter, lay the remains of a circular furnace (C), and a few feet west of it was a well of the usual construction.

\* A full list and details respecting this treasure, obligingly communicated by our Fellow Mr. H. A. Grueber, will be found in the Appendix to this Report.

Block III., situated at the junction of the lane just mentioned with the main street, was of considerable size. All trace of its northern wall is gone, but the block can be guessed to have been 71 feet long by an ascertainable width of 43 feet. The foundations of its western wall showed an exceptional thickness of nearly 3 feet. No trace of chambers could be discovered. In the area, near the eastern wall but not quite parallel to it, were found the remains of a wall, that from its thickness and the depth at which it was discovered, had evidently formed part of one of the earlier buildings of the city. At 42 feet from its southern end was the start of another wall running west. Immediately to the south of this at a higher level lay the remains of a circular furnace (D). (Plate XLVII., fig. 2.) South of this again and nearer the west wall the base of a flue (E) could be made out in a mass of burnt earth and tiling. The direction of this flue was nearly but not quite parallel to the street. The whole mass was at a slightly higher level than the floor of the neighbouring furnace.

On the same side of the enclosure, at 18 feet from the main street, occurred a wood-lined well of the usual construction, and another was found beneath the foundations of the east wall, and encroaching on the lane, at 45 feet from the south-east angle. This second well was 16 feet deep and 2 feet 2 inches square, and two boards deep of its wood lining remained at the bottom.

A stretch of ground over 28 yards wide intervened between the block just mentioned and Block IV., the last in the *insula*. Although no foundations of buildings were to be found in this interval other remains occurred in it. Just outside the south-west corner of Block III., at a few feet from the street, was the floor of a circular furnace, and north-west of this were some patches of floors or the wreck of flues. Again, near the east wall of Block IV., at 19 feet from the street, another mass of tiling, similar to that in Block III., was uncovered, with the base of a flue in it 7 feet long. The axis of the flue was very nearly parallel with the main street. Block IV. was distant 24 yards from the double western gate of the city. No structures of any kind could be found between it and this gate. It may therefore be surmised that the neighbourhood of the gate was left largely free for the exigencies of traffic and defence. Each wall of the enclosure could be made out, with the exception of the southern one, of which not a stone remained. The block measured 59 feet in length, by 31 feet 9 inches in breadth. The plan was the same as that of the majority of the other blocks, a large area backed by two chambers, side by side, of unequal width, in this case with well-preserved walls. In the west wall of chamber No. 3 was a doorway, 4 feet wide, communicating with the road or space on that side, and there was another, with a

tile sill, between chamber No. 2 and the area No. 1. Both chambers had been paved with tiles. In the area was found a mass of tiling, containing a flue, close to and at right angles with the eastern wall. It was very similar to, but rather smaller, than that in the open ground outside the same wall. A length of 5 feet of this flue could be traced. North of it were the scanty relics of a circular furnace, and all the soil around both was much blackened and burnt.

Nothing further was observed in the area, but close without the south-west angle of the enclosure, where the main street falls into the open space about the gate, was a circular well, 4 feet in diameter, 12 feet deep, and lined throughout with flints. As it was sunk beside the roadway, just outside the corner of the enclosure, it may possibly have been used for watering horses and draught cattle entering the city.

A certain number of pits were found in this *insula*, but, as was the case with others in *Insula X.*, the finds in them were scanty, a fact which has some importance attaching to it, as will be seen later on.<sup>a</sup>

The last *insula* to be described is that we have numbered XII. It lies due north of *Insula X.*, and, like *Insula XI.*, was triangular in shape. The side

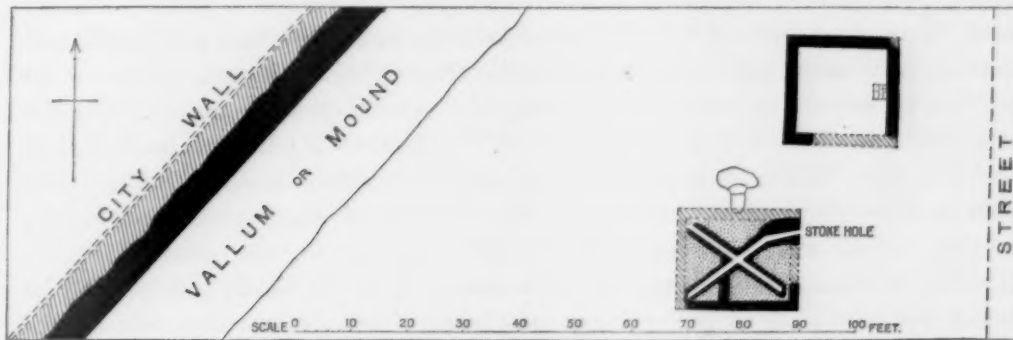


Fig. 2. Plan of buildings discovered in *Insula XII.*

<sup>a</sup> The following are the dimensions of the divisions in the blocks of *Insula XI.*:

Block I. Walls 2 feet thick. No. 1 (area), 37 feet 8 inches by 27 feet 8 inches. Chambers: No. 2, 18 feet 9 inches by 12 feet 3 inches; No. 3, the same by 9 feet 5 inches. Chamber north of Block I. walls 2 feet thick, 13 feet by 15 feet 9 inches.

Block II. Walls averaging 1 foot 9 inches thick. Area, 32 feet by 25 feet 8 inches; inner area, 19 feet 9 inches by 18 feet 9 inches.

Block IV. Walls 1 foot 10 inches thick. No. 1 (area), 36 feet by 28 feet 3 inches. Chambers: No. 2, 16 feet 6 inches by 12 feet 6 inches; No. 3, the same by 14 feet 6 inches. Chamber at angle of modern road, walls 2 feet thick, 17 feet 9 inches by 16 feet 4 inches.



abutting upon the road dividing it from *Insula* X. was 272 feet long from the foot of the mound. The eastern side was 316 feet long, and the north-western side, where it was bounded by the city wall, measured along the foot of the mound 418 feet. Few remains of buildings were to be found within the boundaries of this *insula*.<sup>a</sup> Such as occurred were at the northern end, where two chambers (see plan, fig. 2), 12 feet apart, were dug out. The more northerly had been paved with square tiles, but presented no other features for remark. The southern contained a channelled hypocaust, the ducts of which ran diagonally from angle to angle. The walls did not remain to a sufficient height to show the arrangement of the flues, but there was a well-built furnace passage of brick in the north-east corner. Outside the north wall some rough tiling perhaps showed the presence of a furnace of some kind.

The two chambers<sup>b</sup> appeared to be entirely detached. If they were in any way connected with other buildings these had been completely destroyed. A little south of these structures, and close to the street, the base of a circular furnace (A) was uncovered. But the contents of a pit near the south-east angle offered more matter for remark than any other discoveries made in this quarter. This pit (B) yielded as many as a dozen nearly perfect vessels of pottery. They were found at a depth of 8 feet 4 inches from the present surface of the soil, and seemed as if they had been deposited in three distinct layers. There were patches of moss above and about them, and some bones of animals. The pit was dug out to its full depth of 16 feet. It had a clay bottom, and showed little of the black deposit not uncommon in these rubbish holes. The vessels were of various forms of *ollæ*. Three of them were hand made, of that coarse ware, generally black and badly baked, the paste of which contains a considerable quantity of pounded flint or chalk. It should be noted that the kind of pottery here mentioned differs in its paste from all the other classes of fictile ware found on the site, though unquestionably of the Roman time. It is found in considerable quantity, as often moulded by hand as turned on the potter's wheel. Vessels of some size were made of it, but from the want of cohesion in its composition perfect specimens are rare. It may be added

<sup>a</sup> From the paucity of buildings, etc. in the *insula*, it has not been thought necessary to give a complete plan of it here. The only buildings found in it are shown in fig. 2, to the same scale  $\frac{1}{30}$  inch to a foot) as the other plans.

<sup>b</sup> The following are the dimensions of the two chambers in *Insula* XII.: the northern, 16 feet by 16 feet 3 inches, walls 2 feet thick; the southern, 14 feet 8 inches by 18 feet 9 inches, walls 1 foot 8 inches thick.

that the vessels showing the character of paste described are of the simplest forms of *ollæ*, the chief variation they possess being in the shape of their rims. Such ware might be looked upon as the production of native potters, little influenced by the better methods of manufacture introduced by the Romans. There is, however, a better class found on the site which singularly enough seems an attempt at an improvement on this coarse primitive manufacture. The forms of the vessels in this class are more varied, and the vessels themselves have always been made on the wheel. They are generally red in colour, and the paste contains fewer grains of flint. Two specimens of this class were among those deposited in the pit, and they may be compared with the three first mentioned.

The pottery found at Silchester has not as yet been taken in hand by any specialist, though it is seldom such an opportunity occurs, or is likely to occur again, for a careful examination of such varied amount of material, found also on one site and without any earlier or later admixture. The study, no doubt, would require some time and patience, and the leisure which few in these days appear to possess, but it certainly would repay the trouble bestowed upon it.

With the description of this last find the detailed account of the four *insulæ* examined last season may be brought to a close.

From that account it will be seen that in the *insulæ* described, although there are a large number of buildings or traces of such, very few are of a domestic character. The deduction may therefore be drawn from the nature of the buildings, but more especially from the accessories found in and around them, that this north-western quarter of the town was given up to some important industry.

We have now to endeavour to ascertain what that industry was.

After the completion of the excavation of *Insula IX.*, and while that of *Insula X.* was in progress, it was at first thought, from the number of querns found and from the knowledge that an equal number had been dug up in a neighbouring *insula* (II.), that we had come upon the traces of bakeries, the circular hearths or furnaces being at first sight not unlike the bases of ovens. But a very slight examination proved that this could not be the case, and the number of the querns dug up in the trenches would certainly not have sufficed to furnish a quarter of the workshops along the main street had they been bakeries.

Still less could the remains be those of potteries. The furnaces were distinctly not potters' kilns, and there was a complete absence of the accumulated *débris* of broken and distorted vessels always to be found where potteries have been established.

The discovery of several cakes of metallic substance in *Insulæ* IX. and XI. was thought to be an indication that some metallurgic process had been carried on in certain of the enclosures; but although the flues found in most of the blocks might have been the remains of hearths used in such a process, the circular furnaces certainly were not so used, and no refuse nor scorix were to be found about any of the furnaces. It is true that the earth in some of the areas presented a blackened or reddened appearance, but this might have been caused by the destruction by fire of the wooden roofs which covered them, or have resulted from the presence of the wreck of broken-up hypocausts.

If metal workers had not plied their trade here, it was equally certain that the blocks had not been occupied by tanners; neither could fullers have carried on their business in them, since fulling requires a large supply of water. Certainly there were wells, of which we found three or four in *Insula* IX., one in *Insula* X., and four in *Insula* XI., while a certain number of the pits in two if not three of the *insulæ* were in all probability used as such, they having been found clean and with few objects in them. Also, in this part of the site the water rises readily, and is obtainable at a less depth than elsewhere. Still even the supply named would not have sufficed for fulling operations on such a scale as the remains of the buildings would indicate.

A careful examination of the remains led us to the conclusion that it was from the circular furnaces most was to be learned, and that could we ascertain to what use these had been put, we should be in the way of discovering what was the handicraft, the traces of which our excavations had this year revealed.

The flues occurring in the areas of the blocks have been already sufficiently described, but the furnaces require some further elucidation.

These furnaces appear to have been rude cylinders built up, for the most part, of broken tiles laid with thick joints of clay for mortar. (See Plate XLVII., fig. 2.) They may have been from three to four feet high, with a circular boiler, possibly of iron or bronze, set in the mass of brickwork of which each was composed. Nothing, however, remains of any superstructure; only one or two courses of tiles surrounding a tile hearth are now to be seen in any of them, with occasionally fragments of stone jambs to the openings. The openings or mouths of the furnaces have an average width of 1 foot, and are sometimes turned to the north, sometimes to the south. The diameter of the hearths varies from 2 feet to 2 feet 9 inches, that of the greater number being 2 feet 6 inches. The tile floors are burnt to an ashy grey from the fierceness of the fires, as is the flooring in front of the openings from the raking out of the hot ashes. It is

to be noted that while few of these circular furnaces are to be met with in the blocks, the long flues are, with one exception, never found outside them.

A search amongst the sculptured reliefs upon sepulchral monuments from

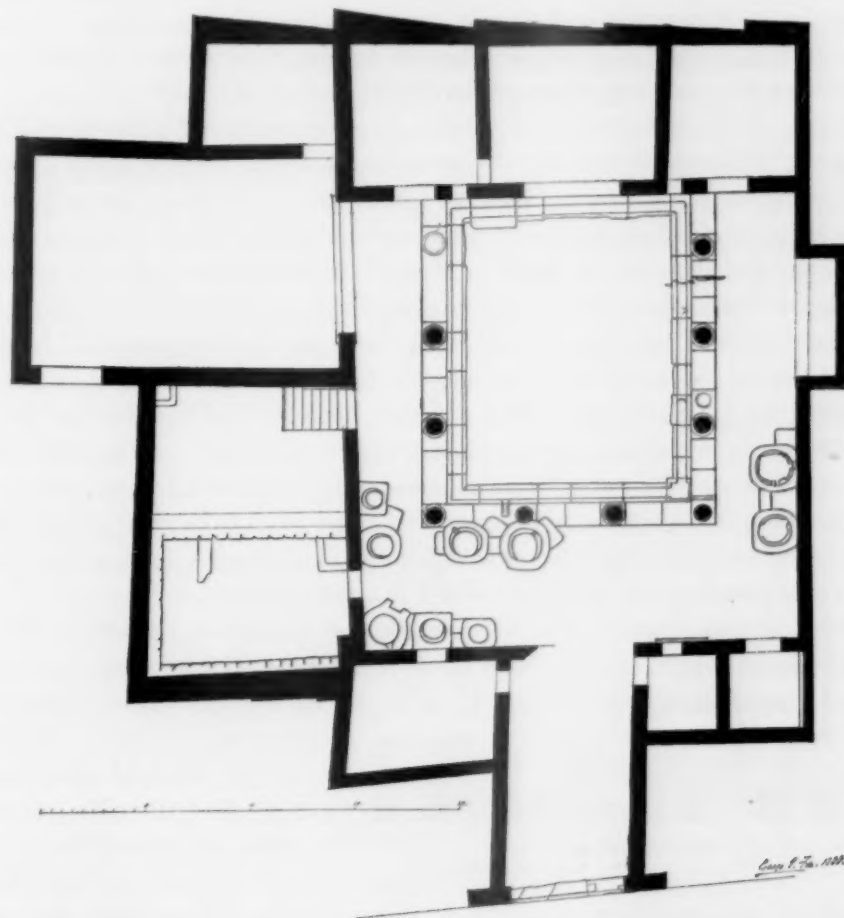


Fig. 3. Plan of a Pompeian house used as a dyeing workshop.

Italy and Gaul, and more especially from Gaul, might possibly throw some light upon the object of these structures, for the buildings and implements connected with trades are often figured in such reliefs; but, as always, the surer way was to seek in the ruins of the Campanian cities for the solution of the question, and we believe we have found that solution within the walls of Pompeii. In that city,

situated in the street of Stabia, is a fine house,\* originally of the Samnite period, but altered at a later time. It consists of a spacious peristyle, to which access was obtained from the street through a wide vestibule. The peristyle was surrounded by various chambers, the principal being a large *tablinum* with a chamber of a fair size on either side, and near it a spacious *triclinium* or *æcus*.

The fact of importance to the present inquiry with respect to this house is that between the columns of its peristyle and against the back walls are a series of furnaces, which, had they been reduced to the condition of those at Silchester, would have presented identically the same appearance. (See Fig. 3.) Not only that, they agree almost to an inch in dimensions. If therefore such a close likeness is to be relied upon, it may with reason be considered that the furnaces at Silchester and those in the house in Pompeii were built for the same purpose.

We know from an inscription, and from a painting now faded,<sup>b</sup> that the house in Pompeii (which was certainly not originally built for the purpose) had been converted to the uses of a dyer's workshop; the furnaces it contained were therefore constructed to serve the uses of the dyer's trade. Looking then to the likeness between the remains at Silchester and those at Pompeii, we may fairly come to the conclusion, which was also independently suggested by Mr. Hope, that the occupation of dyeing was practised at some period in this quarter of the town of *Calleva*, and that the excavations of last season have revealed very considerable traces of the means by which it was carried on.

A word or two must suffice to describe the Pompeian furnaces. They are rude cylindrical blocks, roughly built up of equal quantities of mortar and stone, and from 3 to 4 feet in height. (Fig. 4.) The mouths have jambs and lintels formed



Fig. 4. Furnaces in a dyer's workshop at Pompeii.

generally of lava. Within is a ring of brickwork forming a set-off to the sides,  $3\frac{1}{2}$  inches wide, and from 1 foot 6 inches to 1 foot 10 inches high, on

which rested the cauldron or vat to contain the dye. Occasionally this set-off has flues in it, to allow the heat to penetrate to the sides of the cauldron, and there is always a smoke flue with its exit in the top of the masonry near the rim of the vat. The metal vats have all disappeared. The diameters of the furnaces vary. The largest is 3 feet 4 inches across the top, and measured on its floor 2 feet 9 inches, or exactly the size of the largest of the furnace hearths at Silchester, where only the diameters of the floors can be made out.

\* *Regio VII., Insula II., No. 11.*

<sup>b</sup> Fiorelli, *Descrizione di Pompei*, 184.



The greater number of the furnaces at Silchester were in open ground, but it does not follow that they therefore originally stood exposed to the weather. On the contrary, there is every probability that they were covered by at least wooden sheds. These have, of course, perished, but perhaps the remains of the roof of one may be seen in the square of broken tiling in the northern half of *Insula X*. Such sheds as these, if left only to the action of time and weather, would soon fall to decay and disappear, leaving but few or no traces.

It may be objected that the comparatively small size of the furnaces would not allow cloth to have been dyed in them; but if we suppose, and the supposition is a reasonable one, that winches were rigged up over the vats, there could be no difficulty in dyeing narrow pieces of cloth of some length by keeping the cloth revolving in the boilers by these means. There is no sign of such arrangements over the Pompeian furnaces, and consequently the articles must have been moved and stirred with sticks in the boiling vats.

If the use to which the furnaces were put can be determined with some certainty, this is not the case with the buildings near and round which they occur. As has been said, houses they cannot be, and some, if not all, must have been appropriated to the purposes of the trade carried on in this quarter. As to those which contain remains of circular furnaces there can be no doubt; with the others it is not so easy to divine their use, but perhaps it may be fairly guessed.

Referring again to the dyer's house in Pompeii, it should be noted that the columns of the peristyle show that nails had been driven into them to support lines on which the dyed cloths could be hung to dry. It is clear that this accommodation was far too limited, and besides, there was the disadvantage of the reek from the furnaces close by. It is equally clear why the dyers established themselves in the dilapidated mansion, namely, that the spacious *triclinium*, as well as the *tablinum* and other chambers, afforded ample room for the drying of their goods under cover and for the storage of the same. As at Pompeii, so here at Silchester, covered spaces independent of weather would be required, and as our climate is far less favourable for drying than that of Italy, recourse to artificial heat must often have been found necessary. The areas of the blocks along the main street, which have long flues in them, may have served the purpose of drying sheds, if we suppose that the remains of these flues indicate the existence of rude stoves fashioned somewhat after the manner of channelled hypocausts.

The two chambers of unequal size which are to be found at the north end of each of the areas or sheds, might have served a variety of purposes. Some no



doubt, those for example which show tiled or tessellated floors, might have contained the presses for the better class of goods; in others, cloths, woollen yarns, or wool in its unwashed state, or ready for the vat, might have been stored.

Another theory with respect to the use of some of the areas may here be put forward.

At the present day the materials requisite for carrying on the operations of a trade are but seldom drawn from the neighbourhood in which that trade is practised. In building, for example, the timber used may come from the Baltic, while the stone is extracted from quarries hundreds of miles from the spot where it is employed. Painters have ceased to grind their own pigments, and the oils and varnishes used are prepared by a different set of artisans from those who apply them. Dyers also now derive the materials of their trade from lands as far apart as India and America. This was certainly not so, or but to a limited extent, when Britain was a province of the Roman empire. Then, the neighbouring forest, the nearest quarry or brickfield, supplied the building material required, and where linen was woven, or wool dyed, in the near vicinity or at no great distance, the flax was grown or the plants cultivated from which the dye stuffs were obtained. Without entering on a long disquisition, for which this is not the place, on the substances used as dyes in antiquity, we may with reason venture to conjecture that two of the plants, woad (*isatis tinctoria*)<sup>a</sup> and madder (*rubia tinctorum*),<sup>a</sup> from which dyes known in the Roman period were derived, more especially the latter, might have been cultivated in the neighbourhood of the Roman town now Silchester, and that the process by which these plants were made to give up their colouring matter may very well have been completed by the dyers in the workshops of which we are treating. It is not impossible that the querns, two of which were found in Block VI., *Insula* X., and one *in situ* in the area of Block V. of the same *insula*, may have served, together with others discovered in the trenches, to grind up the roots of the madder in order to prepare it for infusion in the vats, and that the leaves of the woad, which require fermentation to render them available for dyeing, may have been heaped up and manipulated in some of the covered sheds of the enclosures.<sup>b</sup>

<sup>a</sup> Pliny.

<sup>b</sup> It may be of some interest to note here the methods by which the two plants named were, and still are, prepared for the use of dyers.

In the case of woad, the following extract from a work published early in the present century gives an account of the processes by which the raw material is rendered available for the dyers'

It has been noted with respect to the buildings in *Insula X.* that though they belong to one type, consisting of an area and two chambers, there is one exception,

use: "The plant, after being cut, washed, and partly dried, is carried to a mill, and there ground to a paste, after which it is formed into a mass or heap, and being covered to protect it from rain, is left to undergo a partial fermentation for about a fortnight. The heap is then stirred, well mixed, and formed into balls or cakes, which are exposed to the sun and wind to dry, and thereby obviate the putrefactive process which would otherwise take place. Being afterwards collected in heaps, these balls again ferment, become hot, and emit the odour of ammonia or volatile alkali. . . . After the heat has continued for some time, these balls fall into a dry powder, and are then sold to the dyer, who now seldom employs them without a mixture of indigo, which last the woad helps to deoxygenate and render soluble. Formerly, however, this preparation, fermented by well-known means, was employed *alone*, though it was incapable of giving a deep and bright blue colour, because the tingent matter was in union with too great a proportion of the other constituents of the plant. The colour, however, which it did give was very durable." Edward Bancroft, M.D., *Experimental Researches concerning the Philosophy of Permanent Colours, and the best means of producing them by Dyeing, Calico-Printing, etc.* (London, 1813), i. 166, note.

Woad is still cultivated for dyeing purposes both in Lincolnshire and Cambridgeshire, and its preparation, with certain differences, is the same as that described above.

The same writer, describing the plant (*Rubia tinctorum*, Lin.) from which the noted madder dye is obtained, says, "This is properly the Zealand madder, and appears to have been greatly cultivated in that province during more than 300 years; the Emperor Charles the Fifth having encouraged its cultivation by particular privileges conferred on the inhabitants of Zuyderzee for that purpose; and Great Britain alone is supposed for a long time to have paid annually two millions of guilders (nearly 200,000*l.* sterling) for the purchase of Zealand madder; which I believe is never exported otherwise than in a prepared state." *Ibid.* ii. 221-222. He then goes on to explain the manner in which the roots of the plant, which contain the colouring matter, were dried by stove heat and ground into powder for export.

At the present day madder is imported in powder from the south of France.

An extract from another and earlier work, the *Discorsi* on Dioscorides of Matthioli, the Siennese physician and naturalist, will show the cultivation of madder for dyeing purposes in Italy in the sixteenth century. This writer says that the plant was well known in Tuscany everywhere where the dyeing of cloth was practised, and that as the dyers were known to buy every year an infinite quantity of the roots, the country people during the winter dug up these roots and sold an infinite quantity of them in bundles to the dyers. *I discorsi di M. Pietro Matthioli, Sanese, medico cesareo, etc.—nelle sei libri di Pedacio Dioscoride Anazarbeo della materia medicinale. In Venetia MDLXVIII. ii. 971.*

From these remarks it may be seen that in Italy in the sixteenth century the madder roots were furnished to the dyers unprepared, who must therefore have had to grind them themselves. The fact here stated may show what was probably the practice at a much earlier time.

Pliny, writing concerning the distribution of this plant throughout the Roman empire, says that it was produced in nearly all the provinces in great abundance, and was used for dyeing wool and leather.

Block VI, which, unlike the others, is divided into seven compartments of greatly varying size. It is difficult to assign uses to all these chambers. No. 6 is occupied by one of the best preserved of the circular furnaces, and therefore was used for dyeing, and fragments of querns were found in No. 1. It may be, as suggested by Mr. Hope, that such of the dye stuffs as were prepared on the spot were stored in some of the chambers, together with such others, in smaller quantities, as had been brought from a distance. In the house occupied by the dyers in Pompeii, already referred to, a large recess of considerable capacity, made in the walls of the peristyle, had been filled with shelves, and when the house was excavated the remains of glass vessels which had contained some of the dye stuffs were found in it. We may be permitted to imagine a similar use in one or more of the rooms of this block, and also to suppose that the handmills for grinding the madder had a place in chamber No. 1. But this is of course matter for conjecture.

Scouring and bleaching are connected with dyeing, and these processes must also have been practised in the *insulæ* under consideration. This implies that a greater number of furnaces must have formerly been in existence than we have found. Perhaps the flues in the blocks may be the remains of the heating apparatus for the requisite boilers. The wide space of open ground in the *insulæ*, together with the slope of the mound lining the city wall on this side, would have afforded ample room for bleaching, and if the process of sulphuring was also employed, *i.e.* whitening cloth or wool by submitting it to the fumes of burning sulphur, some of the detached chambers in all these *insulæ* would have admirably served this purpose. But this practice possibly belongs rather to fulling than dyeing.\*

The water supply we have found seems scarcely sufficient for carrying on the various processes named. Still it must always be remembered that the trenches, close as they are to each other, cannot clear the entire surface of the ground examined, and therefore more wells and water pits, as well as furnaces, may yet remain beneath the surface of the soil. The plough also may have carried away the remains of many of these last.

Some further remarks may be added as to the date of the remains examined last year.

We have seen that the dyers in Pompeii established themselves in a dilapidated mansion in the street of Stabia, and converted it to their own uses. Similar cases,

\* We are indebted to our Fellow Mr. William Morris for valuable hints as to various processes of dyeing, and also for the opportunity obligingly afforded us by him of seeing some of those processes in operation.

with artisans practising other trades, were not uncommon in the Campanian city, and something of the same kind may have happened here.

It is scarcely to be supposed that the dyers maintained their workshops unchanged in form and arrangement for over three centuries in the main street of *Calleva*. It is far more likely that they set up their works upon ground which had become vacant by the destruction of houses originally built upon the main street. These houses may have been few in number, with a considerable extent of open land behind them. One very slight trace of early structures is to be found in Block III., *Insula XI.*, and the irregular spacing of the blocks may have resulted in some way from the former existence of earlier buildings. The flues found in the blocks had a great likeness to the ducts of a certain form of hypocaust in which the channels were at right angles to each other, and this likeness inclined me in the first instance to consider them as the partial remains of the hypocausts of the earliest houses in this quarter of the town, retained and converted to the dyers' uses.

Mr. Hope, however, who noted them very carefully in making the plans now before us, is of a different opinion, as is Mr. Jones, who had every opportunity of closely examining them day by day in the course of excavation. They both agree in considering these flues the remains of stoves or furnaces, specially constructed by the dyers for some of the processes of their trade, and not adaptations of earlier remains, and in all probability they have come to the correct conclusion.

But although the remains just mentioned may have nothing to do with the earlier houses, there are two facts which point to the presence of change in this quarter. The first is the deposit of treasure turned up in *Insula XI.* It seems to me inconceivable that so large a deposit of coin should have been made in close proximity to busy workshops, and the constant stir and movement which their existence implies. Treasure is more likely to be buried near a house, within its inclosure; in any case where it can be easily watched and resorted to without observation. Let us suppose, therefore, that the pot full of silver *denarii* discovered in *Insula XI.* was buried near a dwelling. If we take the date of this deposit to be somewhat later than that of the latest coin contained in it, a coin in good condition of the earlier years of Septimius Severus, we arrive at an approximate date at which some great change may have taken place in this quarter of the town, possibly the abandonment or destruction of domestic buildings on or near the main street. After such destruction, perhaps even after the lapse of many years, the dyers may likely enough have settled on the deserted land.

Secondly, it is quite clear that there was at some period a re-construction of the houses and other buildings in *Insula IX*. Not only do we find these buildings differently placed from those in the other *insulæ*, but we have discovered, in one of them at least, architectural fragments from earlier edifices used up again.

Changes, even considerable in character, must have occurred during the long period during which the city was in existence, and it is rather a matter of wonder that traces of such changes are not oftener detected. In the centuries covered by the Roman occupation much must have happened in this town in the way of destruction and re-construction, even in times when the current of life and the march of events were far less hurried than in our own day.

One word more. Putting out of consideration the indications of the potters' trade exhibited by the extensive remains discovered by the Medway and in the valley of the Nen, it may be said without fear of contradiction that the traces of handicrafts practised in the Roman period in Britain are few and far between. In consequence, the relics of the industry occurring over a large area of the Roman town at Silchester are of much interest and importance, the more so that they are the first remains on a considerable scale yet found in this country of the art of the dyer.

From the character of the buildings described, and the use to which the quarter of the town in which they occur was put, the objects found in and about them do not, perhaps, quite equal those discovered in other parts of the site. There are, nevertheless, several which deserve special notice.



Fig. 5.

Gold ring found near the west gate.  $\frac{1}{4}$ .

First should be mentioned a small ring of gold (fig. 5), of late Roman date, which was found, in a flattened condition, in clearing the inner face of the city wall near the west gate. It is  $\frac{9}{16}$  inch in diameter, and consists of a band of coarse filagree work, joined to a central bezel containing a pear-shaped carbuncle. The band is  $\frac{1}{4}$  inch in width at its narrowest part, gradually increasing to  $\frac{7}{16}$  inch where it joins the bezel.\*

Besides the ring there was turned up elsewhere in the excavations the stone of

\* A similar stone to that in the ring, but of larger size and unset, was found during the excavations of 1893.



another ring. It is of red jasper,  $\frac{5}{8}$  inch long by  $\frac{1}{2}$  inch wide, rudely engraved with an intaglio representing a youthful figure standing upright and facing to the left. In the left hand he holds what may be fruit, and in the right a branch with a bunch of grapes. Behind the figure is a tree. The figure is nude, with the exception of some drapery falling in straight folds from the shoulder, and may possibly represent Bacchus or the Genius of the Vine. Several engraved gems and intaglios have been found at Silchester, but they are seldom of much interest in subject or execution. As, however, their rudeness of execution is probably due to native workmanship, their discovery is always welcome.

The hoard of silver coins found in *Insula* XI. has already been mentioned. It may, however, be noted that our trenches yielded as many as eighteen other coins<sup>a</sup> in this metal, including a medieval one<sup>b</sup> of king John, with the name of his son Henry.

Of the bronze coins the large proportion turned up were those of the early Empire, a fact which deserves notice. Unfortunately, as is generally the case, they were much worn.

Passing on to other objects in bronze, the most important in point of size is an arm purse. It was found in a pit in *Insula* XI. It appears to have been wrought with great skill out of a thin narrow plate or strip of bronze, the two ends of which were brought together and rivetted to form the ring through which the arm was passed. The boat-shaped body of the purse is worked into seven flattened lobes, and the opening that fitted against the arm is  $2\frac{1}{2}$  inches long and  $1\frac{3}{4}$  inch wide. The flat ring that passed round the arm is an oval measuring 4 inches by 3 inches, with a general breadth of  $\frac{7}{8}$  inch. There are no traces of a lid or lining to the purse, but in the bottom of it is a small hole.

Objects of this class are so rare that only five examples are recorded as having hitherto been found in Britain. One discovered at the Roman station of *Ambo-glanna*, at Birdoswald, in Northumberland, in 1820, and another in 1849, at Farn-dale, Yorkshire, are engraved in the *Archæological Journal*.<sup>c</sup> A third, containing gold and silver coins ranging from Tiberius to Trajan, was discovered at Thorn-grafton, Northumberland, in 1837.<sup>d</sup> A fourth, from Colchester, is preserved,

<sup>a</sup> Of Faustina, Julia Domna, Marcus Aurelius, Caracalla, Macrinus, Elagabalus, Maximinus, Gordian III., Valerianus, Postumus, Honorius.

<sup>b</sup> Only one other medieval coin, a silver penny of Edward I. now in the Reading Museum, is recorded to have been found at Silchester.

<sup>c</sup> xvi. 84, and viii. 89.

<sup>d</sup> Rev. J. Collingwood Bruce, *The Roman Wall*, 3rd edition (London, 1867), 419, and *Archæologia Eliana*, iii. 269, where the purse is figured.



together with the Farndale example, in the British Museum, and a fifth, also from Colchester, is in the National Museum of Antiquities at Edinburgh.<sup>a</sup>

The next object is of pierced and, apparently, cast work, and has evidently formed part of a hinge. It is  $2\frac{3}{4}$  inches wide and  $4\frac{1}{8}$  inches long, with straight sides, but the lower end is obtusely pointed. The



Fig. 6. Bronze hinge of pierced work found in *Insula XI*. ( $\frac{1}{4}$  linear.)

design shows a central stem, with twisted cross-bar towards the bottom, with symmetrically disposed scroll-work, etc. of considerable complexity on either side. The character of these scrolls, with their double endings, is somewhat late-Celtic, but the Roman influence is seen in the straight fillets that form the border on each side, and have the appearance of being imitated from the well-known bead and reed moulding. On the whole the design is remarkably good. The plate itself is only  $\frac{1}{16}$  inch thick, and has at the back four bronze studs, with rivets for attaching it to something.

The position of the rivets shows that the material, whatever it was, to which the hinge was fastened, was  $\frac{1}{8}$  inch thick. No traces of this material remain, and it is therefore not easy to suggest the precise use to which this ornament may have been put. It may have been part of a belt or the hinge of a casket or coffer.

A charming little fragment of enamelled work must next be mentioned. It is a thin plate of bronze, now  $1\frac{3}{4}$  inch long, but originally longer, and widens out from  $\frac{7}{8}$  inch at the broken end to  $1\frac{5}{16}$  inch at the other end, where it is perfect. It is slightly convex on the front, but flat on the back, and is  $\frac{1}{16}$  inch thick in the centre. The sides, which are straight, are turned up for a width of about  $\frac{1}{16}$  inch at an angle of  $60^\circ$ , and have evidently been rivetted to a hexagonal stand or base of some kind. The ornamentation consists of scroll-work of *cloisonné* enamel with central stem, with a ground-work of blue and scrolls filled in with green. Here again, as in the bronze hinge previously described, the design is very late-Celtic in character, though of the Roman period.

A small bronze bell, an object of some rarity on the site, may also be noted.

<sup>a</sup> FU. 1. *Catalogue of the National Museum of Antiquities of Scotland*, Edinburgh, 1892, p. 224.

It is  $1\frac{5}{8}$  inch high, with loop for suspension, and at the mouth is a parallelogram  $1\frac{9}{16}$  inch long by 1 inch wide. The sides taper upwards in a rather graceful curve. The bell still retains parts of its clapper, which is of iron and rusted to one of the sides.

Among the miscellaneous objects in metal turned up were sundry brooches, buckles, rings (two with imitation jewels of glass), pins of various sizes and patterns, needles, *ligulæ* (one ornamented with a spiral thread of silver), keys, a perfect and a broken scale-pan, and two pieces of a bronze scale-beam with the divisions marked by silver studs. The handle of a pewter or white-metal vase was also found, terminating in a well-modelled lion's head. The objects in bone and glass call for no special remark.

I cannot conclude the record of the more notable finds of this year without a mention of some remarkable pieces of pottery forming parts of two vases of precisely similar design and probably cast from the same moulds. I have already referred to a class of pottery of the rudest description as being the product of native workers, uninfluenced by Roman methods; the pottery now in question is a specimen of the manner in which native workers endeavoured to copy the admired work of their Roman masters.

Everyone is acquainted with what we may call pseudo-Samian ware, but possibly it is not generally known that there is a ware found at Silchester, though not in large quantities, which in colour endeavours to vie with it, but unsuccessfully. The red is of a much more orange hue, and is easily washed off, while the glaze of the pseudo-Samian ware is permanent. On the all-important matter of the paste of which the vases are composed, there can be no question of confounding one with the other. The close-grained substance of the pseudo-Samian cannot be mistaken for the often ill-burnt and in many cases buff-coloured stringy paste of the native ware. The ware is often plain and also often ornamented; the ornamentation consisting principally of indented daisy-like flowers variously arranged, in lines, in groups, and sometimes linked together by indented lines. In some examples bands of indented diaper have friezes between them decorated with slip scrolls similar to those of the Durobrivian ware, but these are not common. As yet, however, with one small exception, only the classes of ornamentation just mentioned have been found, but last season the fragments above described were dug up, and they show the first attempt that has come to our notice at Silchester on any appreciable scale of a direct imitation, not only of colour but of form and design, of figured pseudo-Samian vases of an early type. The subject might be

pursued much farther and with interesting results, but it would involve an investigation taking up more time than can be given to it on this occasion.

The accompanying plan (Fig. 7) shows the progress made in the excavation of the site.

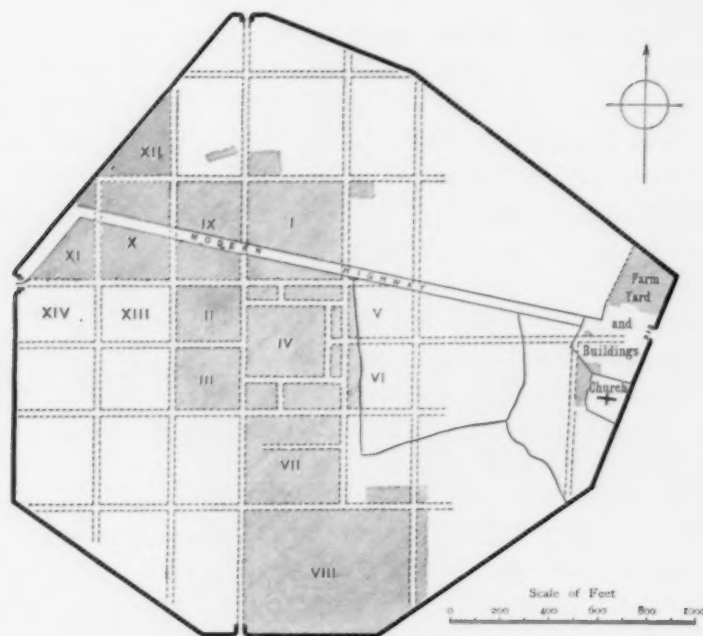


Fig. 7. Block-plan of Silchester, showing portions already excavated up to October, 1894.

## APPENDIX I.

*On a hoard of Roman Coins found at Silchester.**By HERBERT A. GRUEBER, Esq., F.S.A.*

Read March 28, 1895.

THE find of Roman coins which took place at Silchester in July, 1894, consists entirely of silver denarii ranging in date from the time of Marc Antony to Septimius Severus. They numbered in all 253, and the following is a summary of the contents of the hoard:

Marc Antony (Legionary Coins)	9	Faustina Senior	16
Nero	4	Marcus Aurelius	23
Galba	1	Faustina Junior	10
Vitellius	4	Marcus Aurelius and Lucius Verus	1
Vespasian	38	Lucius Verus	3
Titus	9	Lucilla	3
Domitian	7	Commodus	13
Trajan	27	Crispina	1
Hadrian	46	Clodius Albinus	1
Sabina	4	Septimius Severus	1
Antoninus Pius	32		
			253

From the above list it will be seen that the coins are not equally distributed over the period which they cover. The earliest pieces are those struck by Marc Antony, bearing his name, and those of Legions II. and XII. These legions were with him during his residence at Alexandria B.C. 39-31, at which place the coins are supposed to have been struck. Of these legionary coins there exists a continuous series for Legion I. to Legion XXIX. So far as the condition of the coins in this hoard will allow, we can only identify those of Legions II. and XII. Following these we have a blank of about 85 years, no coins being present which were issued between B.C. 31 and the time of Nero A.D. 54, and we may put it even a little later, viz. A.D. 60, as the three coins of that emperor in the hoard cannot be placed at an earlier date. There are thus none of the later coins of the Republic for B.C. 31-27; nor any of Augustus and his successors down to Claudius I. inclusive.\* From the reign of Nero all the emperors are represented on the coins to that of Severus, and some of their empresses, with the exception of Otho, Nerva, Pertinax, Didianus Julianus, and Pescennius Niger. Coins of this last emperor are never found so far west as Gaul and Britain, as they were struck in the East; and the short reigns of the other emperors

\* For the absence of these coins in the hoard see Appendix II., page 489

not represented would account for the absence of these coins. The latest coin in the find is that of Septimius Severus, which we are able to assign to A.D. 193, the first year of his reign. It no doubt belongs to the first issue of that emperor. It would have been interesting if these coins could have been associated with the actual arrival of Severus in Britain; but if that had been so we should most probably have had some of his later coins, as he did not land here till about the end of A.D. 208. These data give us almost the exact time of the burial of the hoard, viz. as near as possible A.D. 200.

The coins themselves are strong evidence of the length of time they had been in circulation. The earliest are much worn, so much so that a minute identification of those of Marc Antony is not in every case possible; but gradually as we come down to later times their condition improves so much that it is evident that the latest pieces could only have been in circulation for a short period before their burial. By this means we are able to arrive at a fairly actual date for the concealment of the hoard.

For the most part the coins are of well-known types; but there are amongst them some which vary slightly from the descriptions given by Cohen in his *Monnaies Frappées sous l'Empire Romain*, and a few which he has not noticed. The smaller varieties have been noticed in the descriptions of the coins which are appended, it is only necessary therefore to draw attention to those which are *unpublished*, and to add some remarks on one or two types of exceptional interest.

Nos. 28-32, with Pax seated to left, is a new type with the inscription COS. ITER. TR. POT. There are coins published with a similar inscription, but bearing representations of Mars and Neptune. No. 33 is similar, but Pax is standing.

No. 36. Quinarii or half-denarii of this type are known, but till now no denarius has been met with. This particular coin is of interest, as it records the conquest of Judæa and the taking of Jerusalem.

No. 99. The occurrence of this coin, which is a denarius struck for currency in Lycia, is of interest, as it shows that it passed in currency with the ordinary imperial denarius, being of the same weight. The issue of this colonial denarius was limited to a few provinces and cities only, amongst which were Crete, Bithynia, and Caesarea in Cappadocia.

No. 114. Cohen had never seen a specimen of this coin, but describes one which was said to be in the *Wetzel* collection, at the same time querying his description, which, however, as proved by the coin in the hoard, is quite accurate.

No. 174 is a new type representing Artemis *Kriophoros* holding a kid on her right hand, whilst with her left she touches a goat springing up to her. This type is an unusual one, and does not appear to occur on any other denarii. The nearest approach to it is to be found on a medallion of Antoninus Pius, which shows Artemis holding a kid on her right hand, her left resting on a sceptre.

No. 231. In this coin we have one of those interesting "restorations" of denarii struck during the Republic. These "restorations" were issued by Trajan, Marcus Aurelius, and Lucius Verus, the last two jointly. The reason for their issue is not at first sight apparent, since their types do not for the most part show any connection with the history of the emperor by

whom they were struck, and besides that the original coin had most probably long passed out of currency. Under Trajan these "restorations" are fairly numerous; but the only one struck by Marcus Aurelius and Lucius Verus is that of which a specimen occurs in the hoard. As will be seen from its description it is of the same type as the legionary coins struck by Marc Antony (see Nos. 1—4). For the issue of this coin there may, however, be a reason, as we know from Dio Cassius that the VIth Legion was not disbanded till after the reign of Commodus. The coin therefore may have been re-struck in honour of that legion. This coin is of special rarity, and it is interesting that one should occur in this hoard.

The last coin to be noticed is No. 247, which has on the obverse the bust and name of Commodus, but the reverse type is from a die of Marcus Aurelius. This is proved by the inscription on it. Commodus had received the "Tribunitian Power" seventeen times only, in A.D. 192, when he also entered on his seventh consulship. On the other hand Marcus Aurelius only received the consulship three times, but was granted the "Tribunitian Power" for the thirty-first time in A.D. 177. As regards the "Imperatorship," both emperors received it eight times, Aurelius in A.D. 177, and Commodus in A.D. 192, so that in this respect the titles of the two emperors correspond. What then is this coin? It is either a forgery of the time, or as the bust of Commodus is youthful it may be an instance of an emperor using the old dies of his predecessors, which was of very common occurrence in later times, but of which no instance is known in Roman coins. The first view is perhaps the more probable, seeing that the coin is of coarse work, and some of the letters are turned upside down. It has also the appearance of having been struck from a cast mould.

From the above remarks it will be seen that this find is interesting from a numismatic point of view as well as historically, for besides enabling us to fix the date of the buildings which surrounded it, it has also added somewhat to our numismatic knowledge by giving several new types. It rarely happens that so many coins of this class and period are found together in this country; on this account a complete list has been appended. In the description of the coins references have been given to Cohen's work entitled *Monnaies Frappées sous l'Empire Romain*, 2nd ed.

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#### DESCRIPTION OF THE COINS.

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##### REPUBLICAN DENARII.

MARC ANTONY, B.C. 39—31.

1—2. *Obv.* ANT . AVG . III VIR . R . P . C. Galley to left.

*Rev.* LEG . II. Three standards, centre one surmounted by eagle. *Cohen*, I. 27.

3—4. Similar: but inscription on *rev.* LEG . XII. *Cohen*, I. 41.

5—9. Similar to Nos. 1—2: but the inscriptions on the *rev.* are illegible, the coins being much worn.



IMPERIAL DENARII.

NERO, A.D. 54—68.

10. *Obv.* NE[RO CAESAR] AV[GVSTVS]. Bust of Nero to right, laureate.  
*Rev.* IV[PPITER CVSTOS]. Jupiter seated to left, holding thunderbolt and sceptre. *Cohen*,  
 I. 118. *Worn.*

- 11—13. *Obv.* NERO CAESAR AVGVSTVS. Bust of Nero to right, laureate.  
*Rev.* SALVS. Salus seated to left, holding patera. *Cohen*, I. 314. *Worn.*

GALBA, A.D. 68—69.

14. *Obv.* IMP. SER. GALB[A CAESAR AVG]. Head of Galba to right, laureate.  
*Rev.* DIVA AVGVSTA. Livia standing to left, holding patera and sceptre. *Cohen*, I. 55.  
*Rubbed.*

VITELLIUS, A.D. 69.

- 15—16. *Obv.* A. VITELLIVS GERMAN. IMP. TR. P. Head of Vitellius to right, laureate.  
*Rev.* CONCORDIA PR. Concordia seated to left, holding patera and cornucopiæ. *Cohen*, I. 20.  
 17—18. *Obv.* A. VITELLIVS GERMANICVS IMP. Head of Vitellius to right, bare.  
*Rev.* Victory seated to left, holding patera and palm. *Cohen*, I. 21.

VESPASIAN, A.D. 69—79.

19. *Obv.* CAESAR VESPASIANVS AVG. Bust of Vespasian to right, laureate.  
*Rev.* ANNONA AVG. Annona seated to left, holding her robe in right hand. *Cohen*, I. 30.  
 20. *Obv.* IMP. CAES. VESP. AVG. P. M. Bust of Vespasian to right, laureate.  
*Rev.* AVGVST PON. MAX. Sacrificial implements. *Cohen*, I. 42.  
 21—22. Similar: but legend on *rev.* AVGVST TRI. POT. *Cohen*, I. 43.  
 23. *Obv.* CAESAR VESPASIANVS AVG. Bust as on No. 20.  
*Rev.* CERES AVGVST. Ceres standing to left, holding ears of corn and torch. *Cohen*, I. 54.  
 24. *Obv.* IMP. CAES. VESP. AVG. P. M. COS. III. Bust as on No. 20.  
*Rev.* CONCORDIA AVGVSTI. Concordia seated to left, holding patera and cornucopiæ. *Cohen*,  
 I. 74.  
 25—27. *Obv.* IMP. CAESAR VESPASIANVS. AVG. Bust as on No. 20.  
*Rev.* COS. VIII. Mars standing to left, holding spear and trophy. *Cohen*, I. 125.  
 28—32. *Obv.* IMP. CAESAR VESPASIANVS AVG. Bust as on No. 20.  
*Rev.* COS. ITER. TR. POT. Pax seated to left, holding branch and cornucopiæ. *Unpub-*  
*lished.*  
 33. Similar: but on *rev.* Pax standing. *Unpublished.*  
 34. *Obv.* CAESAR VESPASIANVS AVG. Bust of Vespasian to left, laureate.  
*Rev.* IMP. XIX. Modius with ears of corn. *Cohen*, I. 215.

- 35—36. *Obv.* IMP. CAESAR VESPASIANVS AVG. Bust as on No. 20.  
*Rev.* IYDAEA. Judaea seated at foot of trophy. *Cohen*, I. 225.
37. *Obv.* IMP. CAES. VESP. AVG. P. M. Bust as on No. 20.  
*Rev.* PON. MAX. Vesta seated to left, holding simpulum. *Cohen*, I. 358.
38. *Obv.* IMP. CAESAR VESP. AVG. Bust as on No. 20.  
*Rev.* PON. MAX. TR. P. COS. V. Caduceus, winged. *Cf. Cohen*, I. 361.  
 A variety of *Cohen* reading VESP for VESPAS.
39. *Obv.* IMP. CAESAR VESPASIANVS AVG. Bust as on No. 20.  
*Rev.* PON. MAX. . . . Vespasian seated to right, holding sceptre and branch. *Cf. Cohen*, I. 363.
- 40—44. *Obv.* IMP. CAESAR VESPASIANVS AVG. Bust as on No. 20.  
*Rev.* PON. MAX. TR. P. COS. VI. Pax seated to left, holding branch. *Cohen*, I. 366.
- 45—47. *Obv.* IMP. CAES. VESP. AVG. CENS. Bust as on No. 20.  
*Rev.* PONTIF. MAXIM. Vespasian seated to right, holding sceptre and branch. *Cohen*, I. 386.
48. *Obv.* IMP. CAESAR VESP. AVG. Bust as on No. 20.  
*Rev.* PONTIF. MAXIM. Caduceus, winged. *Cohen*, I. 390.
49. *Obv.* IMP. CAES. VESP. AVG. CEN. Bust as on No. 20.  
*Rev.* SALVS AVG. Salus seated to left, holding patera. *Cohen*, I. 431.
50. *Obv.* DIVVS AVGVSTVS VESPASIANVS. Bust as on No. 20.  
*Rev.* s. c. on shield, supported by two capricorns; below, globe. *Cohen*, I. 497.
- 51—52. *Obv.* IMP. CAES. VESP. AVG. Bust as on No. 20.  
*Rev.* TRI. POT. Vesta seated to left, holding simpulum. *Cohen*, I. 561.
53. Similar: but *obv.* legend IMP. CAES. VESPA. AVG. P. M. COS. IIII. *Cohen*, I. 563.
- 54—55. *Obv.* IMP. CAES. VESP. AVG. P. M. COS. III. Bust as on No. 20.  
*Rev.* VESTA. Vesta standing to left, holding simpulum and sceptre. *Cohen*, I. 572.
56. *Obv.* IMP. CAES. VESP. AVG. P. M. COS. IIII. Bust as on No. 20.  
*Rev.* VICTORIA AVGVSTI. Victory to right crowning standard. *Unpublished*.

TITUS, A.D. 79—81.

57. *Obv.* T. CAESAR VESPASIANVS. Bust to right, laureate.  
*Rev.* ANNONA AVG. Annona seated to left. *Cohen*, I. 17.
58. *Obv.* T. CAESAR IMP. VESPASIANVS. Bust to right as the preceding.  
*Rev.* COS. V. Eagle standing on cippus. *Cohen*, I. 60.
59. *Obv.* T. CAES. IMP. VESP. PONT. TR. POT. Bust as on No. 57.  
*Rev.* [NEP.]REX. Neptune standing to left, holding acrostolium and sceptre. *Cohen*, I. 120.
60. *Obv.* T. CAESAR IMP. VESPASIANVS. Bust as on No. 57.  
*Rev.* TR. POT. VIII. COS. VII. Quadriga to left. *Cohen*, I. 335.

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- 61—62. *Obv.* IMP . TITVS CAES . VESPASIAN . AVG . P . M . Bust to left, laureate.  
*Rev.* TR . P . IX . IMP . XV . COS VIII . P . P . Trophy at the base of which are seated a male  
 and a female captive. *Cohen*, I. 305.
63. *Obv.* Similar: but bust to right.  
*Rev.* Similar: but type, Throne. *Cohen*, I. 311.
64. *Obv.* Same as No 61.  
*Rev.* Same as No 61: but type, Dolphin on tripod. *Cohen*, I. 320.
65. *Obv.* Same as No. 63.  
*Rev.* Same as No. 61: but type, Curule chair surmounted by wreath. *Cohen*, I. 317.

DOMITIAN, A.D. 81—96.

66. *Obv.* CAESAR AVG . P . DOMITIANVS . Bust of Domitian to right, laureate.  
*Rev.* COS . V . Horseman to right. *Cohen*, I. 49.
67. *Obv.* IMP . CAES . DOMIT . AVG . GERM . P . M . TR . P . VIII . Bust as on the preceding.  
*Rev.* IMP . XIX . COS . XIII . CENS . P . P . P . Pallas to left, holding spear. *Cohen*, I. 250.
68. *Obv.* Similar: but legend ending TR . P . X.  
*Rev.* Similar: but legend IMP . XXI . COS . XV . CENS . P . P . P . *Cohen*, I. 263.
69. *Obv.* Similar: but legend ending TR . P . XIII.  
*Rev.* IMP . XXII . COS . XVI . CENS . P . P . P . Pallas to right, holding spear and shield.  
*Cohen*, I. 288.
70. *Obv.* CAES . AVG . P . DOMIT . COS . III . Bust as on No. 66.  
*Rev.* PRINCEPS IVVENTVT . Spes to left, holding flower. *Cohen*, I. 374.
71. *Obv.* CAESAR AVG . P . DOMITIANVS COS . VI . Bust as on No. 66.  
*Rev.* PRINCEPS IVVENTVTIS . Vesta seated to left, holding palladium and spear. *Cohen*,  
 I. 377.
72. *Obv.* Same.  
*Rev.* PRINCEPS IVVENTVTIS . Two hands clasping standard on prow. *Cohen*, I. 393.

TRAJAN, A.D. 98—117.

73. *Obv.* IMP . TRAIANO AVG . GER . DAC . P . M . TR . P . COS . VI . P . P . Bust of Trajan to right,  
 laureate, and slightly draped.  
*Rev.* ALIM . ITAL . — S . P . Q . R . OPTIMO PRINCIPI . Abundantia standing, holding ears of  
 corn and cornucopiæ; at her side a child. *Cohen*, II. 9.
- 74—75. *Obv.* IMP . TRAIANO AVG . GER . DAC . P . M . TR . P . Bust as on the preceding.  
*Rev.* COS . V . P . P . S . P . Q . R . OPTIMO PRINC . Victory to left, holding wreath and palm.  
*Cohen*, II. 74.
- 76—78. *Obv.* IMP . TRAIANO AVG . GER . DAC . P . M . TR . P . Bust as on No. 73.  
*Rev.* COS . V . P . P . S . P . Q . R . OPTIMO PRINC . Aequitas standing to left, holding scales and  
 cornucopiæ. *Cohen*, II. 85.

79. Similar: but type on reverse, Aequitas seated. *Cohen*, II. 86.
80. Similar: but type on reverse, Fortuna holding rudder and cornucopiæ. *Cohen*, II. 87.
81. Similar: but type on reverse, Trophy. *Cohen*, II. 100.
82. *Obv.* Same as No. 76.  
*Rev.* DAC . CAP . — COS . V . P . P . S . P . Q . R . OPTIMO PRINC. Dacia seated to left on arms.  
*Cohen*, II. 120.
83. *Obv.* Same as No. 76.  
*Rev.* DANUVIUS—COS . V . P . P . S . P . Q . R . OPTIMO PRINC. The Danube reclining to left.  
*Cohen*, II. 136.
84. *Obv.* IMP . TRAIANVS AVG . GER . DAC . P . M . TR . P . COS . VI . P . P . Bust as on No. 73.  
*Rev.* DIVVS PATER TRAIAN. Trajan's father seated to left holding patera and sceptre.  
*Cohen*, II. 140.
85. *Obv.* IMP . CAES . NERVA TRAIAN . AVG . GERM. Bust as on No. 73.  
*Rev.* P . M . TR . P . COS . III . P . P . Hercules standing facing on altar, holding club and lion's skin. *Cohen*, II. 215.
86. Similar: but legend on reverse, P . M . TR . P . COS . III . P . P . *Cohen*, II. 231.
87. Similar: but type of reverse, Victory standing towards left, holding wreath and palm.  
*Cohen*, II. 240.
- 88—89. Similar: but Victory to right. *Cohen*, II. 241.
90. *Obv.* IMP . NERVA TRAIANVS AVG . GER . DACIVS. Bust as on No. 73.  
*Rev.* P . M . TR . P . COS . V . P . P . Mars walking to right, carrying spear and trophy.  
*Cohen*, II. 255.
91. *Obv.* IMP . CAES . NER . TRAIANO OPTIMO AVG . GER . DAC. Bust of Trajan to right, laureate and draped.  
*Rev.* P . M . TR . P . COS . VI . P . P . S . P . Q . R . Virtus standing to right, his foot on helmet, holding spear and sword. *Cohen*, II. 274.
92. Similar: but type of reverse, Pax standing to left, holding caduceus and cornucopiæ.  
*Cohen*, II. 278.
93. *Obv.* IMP . TRAIANO AVG . GER . DAC . P . M . TR . P . COS . V . P . P . Bust as on No. 73.  
*Rev.* S . P . Q . R . OPTIMO PRINCIPI. Ceres standing to left, holding ears of corn and patera. *Cf. Cohen*, II. 316. On coins described by *Cohen*, Ceres always holds ears of corn and a torch.
94. Similar: but type of reverse, Virtus standing to right, her foot on helmet, holding spear and sword. *Cohen*, II. 401.
95. Similar: but type of reverse, Abundantia standing to left, holding ears of corn and cornucopiæ; before her, modius; behind her, prow of vessel. *Cohen*, II. 467.
96. Similar: but type of reverse, three standards. *Cohen*, II. 577.

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97—98. *Obv.* IMP . TRAIANO AVG . GER . DAC . P . M . TR . P . Bust as on No. 73.

*Rev.* VESTA — COS . V . P . P . S . P . Q . R . OPTIMO PRINCI. Vesta seated to left, holding palladium and sceptre. *Cohen*, II. 644.

99. *Obv.* AVT . KAIC . NEP . TPAIANOC CEB . ΓΕΡΜ. Bust to right, laureate.

*Rev.* ΔΗΜ . ΕΞ . ΥΠΑΤ . Β. Two lyres side by side; surmounted by owl.  
Struck for Lycia.

HADRIAN, A.D. 117—138.

100. *Obv.* IMP . CAES . TRAIAN . HADRIANO OPT . AVG . GER . DAC. Bust of Hadrian to right, laureate, slightly draped.

*Rev.* ADOPTIO — PATHIC . DIVA TRAIAN . AVG . P . P . M . TR . P . COS . P . P . Trajan and Hadrian holding right hands. *Cohen*, II. 3.

101. *Obv.* IMP . CAESAR TRAIAN . HADRIANVS AVG. Bust as on the preceding.

*Rev.* AET . AVG . — P . M . TR . P . COS . II. Aeternitas standing to left, holding heads of the Sun and Moon. *Cohen*, II. 128.

102. *Obv.* IMP . CAES . TRAIAN . HADRIANO AVG . DIVI[TRA]. Bust as on No. 100.

*Rev.* CONCORD . — PARTH . F . DIVI NER . NEP . P . M . TR . P . COS. Concordia seated to left, holding patera; cornucopiae below her seat. *Cf. Cohen*, II. 248.

This is a variety of the coin described in *Cohen*, on which a figure of Spes is seen behind Concordia.

103—105. *Obv.* Same as No. 101.

*Rev.* CONCORD . — P . M . TR . P . COS . II. Concordia seated as on the preceding. *Cohen*, II. 253.

106. *Obv.* HADRIANVS AVGVSTVS. Bust to right, laureate, slightly draped.

*Rev.* COS . III. Neptune standing to left, his foot on prow, holding acrostolium and trident. *Cohen*, II. 309.

107—108. Similar: but type of reverse, Diana standing to right, holding arrow and bow. *Cohen*, II. 315.

109. Similar: but type of reverse, Virtus standing to right, her foot on helmet, holding spear and sword. *Cohen*, II. 353.

110. Similar: but type of reverse, Libertas standing to left, holding cap and sceptre. *Cohen*, II. 374.

111—112. *Obv.* HADRIANVS AVGVSTVS P . P . Head of Hadrian to right, laureate.

*Rev.* COS . III. Abundantia seated to left, holding poppy and cornucopiae. *Cohen*, II. 350.

113. Similar: but type of reverse, Spes walking to left. *Cf. Cohen*, II. 390.

The coin described by *Cohen* is without P . P . (Pater Patriae) at the end of the *obr.* legend.

114. *Obv.* Same as No. 106.

*Rev.* COS . III. Female figure, standing to left, her foot on cuirass, holding flower and cornucopiae. *Cohen*, II. 399.

115. Similar: but type of reverse, Seven stars above crescent. *Cohen*, II. 466.

- 116—117. *Obv.* HADRIANVS AVG . COS . III . P . P . Head to right, laureate.  
*Rev.* FIDES PVBLICA. Fides standing to right, holding ears of corn and patera with fruit.  
*Cohen*, II. 715.
118. *Obv.* HADRIANVS AVGVSTVS P . P . Bust of Hadrian to right, laureate and draped.  
*Rev.* INDVLGENTIA AVG . — COS . III. Indulgentia seated to left, holding sceptre. *Cf. Cohen*, II. 845.  
 A variety, the bust of the Emperor being draped.
- 119—121. *Obv.* IMP . CAESAR TRAIAN . HADRIANVS AVG. Bust to right, laureate, slightly draped.  
*Rev.* IVSTITIA . — P . M . TR . P . COS . II. Justitia, seated to left, holding patera and sceptre. *Cohen*, II. 876.
122. *Obv.* Same as No. 118.  
*Rev.* LIBERALITAS AVG . — COS . III. Liberalitas standing to right, emptying cornucopiae.  
*Cf. Cohen*, II. 917.  
 A variety, the bust of the Emperor being draped and COS . III. being in the exergue.
123. *Obv.* Same as No. 119.  
*Rev.* LIB . PVB . — P . M . TR . P . COS . III. Liberalitas seated to left, holding branch and sceptre. *Cohen*, II. 902.
124. *Obv.* HADRIANVS AVG . COS . III . P . P . Head to right.  
*Rev.* MONETA AVG. Moneta standing to left, holding scales and cornucopiae. *Cohen*, II. 963.
- 125—126. *Obv.* IMP . CAES . TRAIAN . HADRIANO AVG . DIVI TRAIAN . Bust to right, laureate, slightly draped.  
*Rev.* PAX . — PARTH . F . DIVI NER . NEP . P . M . TR . P . COS . Pax standing to left, holding branch and cornucopiae. *Cohen*, II. 104.
127. *Obv.* IMP . CAESAR TRAIAN . HADRIANVS AVG. Bust to right, laureate, draped and wearing cuirass.  
*Rev.* PAX . — P . M . TR . P . [COS . II.] Pax, as on the preceding. *Cohen*, II. 1015.
128. *Obv.* HADRIANVS AVG . COS . III . P . P . Head to right, laureate.  
*Rev.* PIETAS AVG. Pietas seated to left, holding patera and sceptre. *Cohen*, II. 1037.
129. *Obv.* IMP . CAESAR TRAIAN . HADRIANVS AVG. Bust to right, laureate, slightly draped.  
*Rev.* P . M . TR . P . COS . III. Mars walking to right, carrying spear and trophy. *Cohen*, II. 1073.
- 130—131. *Obv.* IMP . CAESAR TRAIAN . HADRIANVS AVG. Head to right, laureate.  
*Rev.* P . M . TR . P . COS . III. Victory walking to right and bearing trophy. *Cohen*, II. 1131.
- 132—133. Similar: but type of reverse, Roma seated to left, holding Victory and spear. *Cohen*, II. 1108.
134. Similar: but type of reverse, Genius standing to left, near an altar, holding patera and cornucopiae. *Cohen*, II. 1093.
135. *Obv.* HADRIANVS AVG . COS . III . P . P . Head to right, laureate.  
*Rev.* RESTITVTORI HISPANIAE. Emperor raising Hispania kneeling and holding branch.  
*Cohen*, II. 1260.



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136. *Obv.* IMP . CAESAR TRAIAN . HADRIANVS AVG. Head to right, laureate.  
*Rev.* SAL . AVG . — P . M . TR . P . COS . III. Salus seated to left, feeding serpent rising from altar. *Cohen*, II. 1324.
137. Similar: but bust on obverse draped and wearing cuirass. *Cohen*, II. 1327.
- 138—139. *Obv.* HADRIANVS AVG . COS . III . P . P. Bust to right, slight drapery before bust.  
*Rev.* SALVS AVG. Salus standing to right, feeding serpent rising from altar. *Cohen*, II. 1335.
140. Similar: Laureate head on obverse; and on reverse Salus standing to left, holding patera and sceptre, and sacrificing at altar. *Cohen*, II. 1329.
141. *Obv.* IMP . CAESAR TRAIAN . HADRIANVS AVG. Bust to right, laureate, slightly draped.  
*Rev.* SALVS AVG . — P . M . TR . P . COS . III. Salus seated to left, feeding serpent rising from altar. *Cf. Cohen*, II. 1353.  
A variety, the bust being draped.
142. *Obv.* HADRIANVS AVG . COS . III . P . P. Head to right.  
*Rev.* TELLVS STABIL. Female figure standing to left, holding ploughshare and rake. *Cohen*, II. 1425.
143. *Obv.* HADRIANVS AVGVSTVS. Bust to right, draped.  
*Rev.* TRANQVILLITAS AVG . COS . III . P . P. Tranquillitas standing to left, holding sceptre and leaning on column. *Cohen*, II. 1440.
144. *Obv.* Same as No. 142.  
*Rev.* VICTORIA AVG. Victory standing to right, branch in left hand. *Cohen*, II. 1454.
145. *Obv.* Same as No. 142.  
*Rev.* VOTA PVBLICA. The Empress sacrificing at altar. *Cohen*, II. 1481.

SABINA, WIFE OF HADRIAN.

146. *Obv.* SABINA AVGVSTA. Bust of Sabina to right, diademed and draped, hair *en queue*.  
*Rev.* CONCORDIA AVG. Concordia standing to left, holding patera and double cornucopiae. *Cohen*, II. 3.
147. *Obv.* SABINA AVGVSTA HADRIANI AVG . P . P. Bust as on the preceding.  
*Rev.* CONCORDIA AVG. Concordia seated to left, holding patera and sceptre. *Cohen*, II. 25.
- 148—149. *Obv.* Same as No. 146.  
*Rev.* IVNONI REGINAE. Juno standing to left, holding patera and sceptre. *Cohen*, II. 43.

ANTONINVS PIVS, A.D. 138—161.

150. *Obv.* ANTONINVS AVG . PIVS P . P . TR . P . COS . III. Head of Antoninus to right, laureate.  
*Rev.* AEQVITAS AVG. Aequitas standing to left, holding scales and sceptre. *Cohen*, II. 14.
151. *Obv.* IMP . T . AEL . CAES . HADRI . ANTONINVS. Head to right, bare.  
*Rev.* AVG . PIVS P . M . TR . P . COS . DES . II. Fides standing to right, holding ears of corn and basket of fruit. *Cohen*, II. 79.

152. *Obv.* Similar: but HADR.   
*Rev.* AVG . PIVS . P . M . TR . P . COS . II . P . P. Two right hands joined, holding caduceus.   
*Cf. Cohen, II. 100.*   
 A variety, reading HADR for HADRI.
153. *Obv.* ANTONINVS AVG . PIVS P . M . TR . P . COS . III. Head to right, bare.   
*Rev.* CLEMENTINA AVG. Clementia standing to left, holding patera and sceptre. *Cohen, II. 123.*
154. *Obv.* DIVVS ANTONINVS. Head to right, bare.   
*Rev.* CONSECRATIO. Eagle standing on garlanded altar. *Cohen, II. 155.*
155. *Obv.* Similar: bust slightly draped.   
*Rev.* CONSECRATIO. Funeral pyre. *Cf. Cohen, II. 163.*   
 A variety, the bust being draped.
156. *Obv.* ANTONINVS AVG . PIVS . P . P . TR . P . XVI. Head to right, laureate.   
*Rev.* COS . IIII. Vesta standing to left, holding simpulum and palladium. *Cohen, II. 197.*
157. *Obv.* ANTONINVS AVG . PIVS . P . P. Head to right, laureate.   
*Rev.* COS . IIII. Aequitas standing to left, holding scales and sceptre. *Cohen, II. 228.*
158. *Obv.* ANTONINVS AVG . PIVS . P . P . TR . P . XII. Head to right, laureate.   
*Rev.* COS . IIII. Felicitas standing to left, holding caduceus and cornucopie. *Cohen, II. 252.*
- 159—160. *Obv.* Similar: but TR . P . XVI.   
*Rev.* COS . IIII. Fortuna standing to right, holding rudder and cornucopie. *Cohen, II. 270.*
161. *Obv.* Similar: but TR . P . XV.   
*Rev.* COS . IIII. Abundantia standing to left, holding ears of corn and resting left hand on modius placed on forepart of vessel. *Cohen, II. 288.*
162. Similar: but TR . P . XVIII . on obverse. *Cohen, II. 292.*
163. *Obv.* ANTONINVS AVG . PIVS . P . P. Head to right, laureate.   
*Rev.* COS . IIII. Two right hands joined holding caduceus and two ears of corn. *Cohen, II. 344.*
164. *Obv.* DIVVS ANTONINVS. Head to right, bare.   
*Rev.* DIVO PIO. Altar. *Cohen, II. 357.*
165. *Obv.* ANTONINVS AVG . PIVS P . P . TR . P . XXII. Bust to right, laureate.   
*Rev.* FORTVNA OPSEQUIENS (sic) COS . IIII. Fortuna standing to left, holding rudder and cornucopie. *Cohen, II. 390.*
166. *Obv.* ANTONINVS AVG . PIVS P . P . COS . III. Head to right, laureate.   
*Rev.* IMPERATOR II. Victory standing to left, holding wreath and palm. *Cohen, II. 437.*
- 167—169. *Obv.* ANTONINVS AVG . PIVS P . P. Head to right, laureate.   
*Rev.* LIB . IIII.—TR . POT . COS IIII. Liberalitas standing to left, holding tessera and cornucopie. *Cohen, II. 490.*

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170. *Obv.* IMP . CAES . T . AEL . HADE . ANTONINVS AVG . PIVS . P . P. Head to right, laureate.  
*Rev.* PAX—TR . POT . XIII . COS . III. Pax standing to left, holding branch and sceptre.  
*Cf. Cohen, II. 552.*  
 A variety; Pax holding a sceptre, and not, as usual, a cornucopiæ.
171. *Obv.* ANTONINVS AVG . PIVS P . P . TR . P . XXIII. Head to right, laureate.  
*Rev.* PIETATI AVG . COS . III. Pietas standing to left between two children, and holding another on each arm. *Cohen, II. 631.*
172. *Obv.* Same.  
*Rev.* SALVTI AVG . COS . III. Salus standing to left, feeding serpent rising from altar and holding cornucopiæ. *Cohen, II. 741.*
173. *Obv.* ANTONINVS AVG . PIVS P . P. Head to right, bare.  
*Rev.* TR . P . COS . III. Fortuna standing to left, holding rudder and cornucopiæ. *Cohen, II. 859.*
174. *Obv.* ANTONINVS AVG . PIVS P . P . IMP . II. Head to right, laureate.  
*Rev.* TR . POT . XIX . COS . III. Female figure (Artemis) standing to left, holding kid on right hand; her left touching goat which springs up. *Unpublished.*
175. *Obv.* Same.  
*Rev.* TR . POT . XX . COS . III. Salus seated to left, feeding serpent which rises from altar. *Cohen, II. 1023.*
176. *Obv.* Same.  
*Rev.* TR . POT . XXI . COS . III. Roma seated to left, holding Victory and sword. *Cohen, II. 1028.*
177. *Obv.* ANTONINVS AVG . PIVS P . P. Head to right, laureate.  
*Rev.* TR . POT . COS . III. Soldier standing to left, holding spear and sword. *Cohen, II. 945.*
178. *Obv.* ANTONINVS AVG . PIVS P . P . TR . P . XXII. Head to right, laureate.  
*Rev.* VOTA SOL . DEC . II.—COS . III. Antoninus standing to left, sacrificing at altar. *Cohen, II. 1102.*
179. *Obv.* Same.  
*Rev.* VOTA SVSCEPTA DEC . III.—COS . III. Antoninus sacrificing at altar, &c. as preceding.
- 180—181. Similar: but legend on obverse ending TR . P . XXV. and on reverse, VOTA SVSCEP . DECEXX . III.—COS . III. *Cohen, II. 1117.*

FAUSTINA SENIOR, WIFE OF ANTONINVS PIVS.

- 182—184. *Obv.* DIVA FAVSTINA. Bust of Faustina to right, draped.  
*Rev.* AETERNITAS. Aeternitas standing towards left, her right hand raised, left holding sceptre. *Cohen, II. 26.*
- 185—186. Similar: Aeternitas holds globe; above her head a veil. *Cohen, II. 32.*
187. Similar: Aeternitas holds phoenix. *Cohen, II. 11.*
188. *Obv.* DIVA AVG . FAVSTINA. Bust as on No. 182.  
*Rev.* AETERNITAS. Aeternitas standing towards right, holding sceptre. *Cohen, II. 41.*

189. *Obv.* Same as No. 182.  
*Rev.* AVGVSTA. Ceres veiled, standing to left, holding ears of corn and torch. *Cohen*, II. 78.
190. Similar: but reverse type, Vesta standing to left, holding simpulum and palladium. *Cohen*, II. 108.
191. Similar: but reverse type, Female figure standing to left near altar, right hand raised, left holding cista. *Cohen*, II. 124.
- 192—194. Similar: but reverse type, Ceres standing to left, holding torch; over left arm her robe. *Cohen*, II. 114.
195. *Obv.* Same as No. 182.  
*Rev.* CONSECRATIO. Peacock to right. *Cohen*, II. 175.
196. *Obv.* Same as No. 188.  
*Rev.* PIETAS AVG. Pietas standing to left, near altar, both hands raised. *Cohen*, II. 251.
197. *Obv.* Same as No. 182.  
*Rev.* VESTA. Vesta standing to left, holding palladium and sceptre. *Cohen*, II. 291.

MARCUS AURELIUS, A.D. 161—180.

198. *Obv.* IMP . M . AVREL . ANTONINVS . AVG. Head of Aurelius to right, bare.  
*Rev.* CONCORD . AVG . TR . P . XV . COS . III. Concordia seated to left, holding patera and resting left arm on figure of Spes. *Cohen*, III. 30.
199. Similar: bust draped and wearing cuirass.  
 This is a variety not mentioned by Cohen.
- 200—202. *Obv.* IMP . M . ANTONINVS AVG. Head to right, bare.  
*Rev.* Similar: but legend ending TR . P . XVII . COS . III. *Cohen*, III. 37.
- 203—206. *Obv.* AVRELIVS CAESAR AVG . PII F. Head to right, bare.  
*Rev.* COS . II. Emperor standing to left, holding branch and cornucopie. *Cohen*, III. 110.
207. *Obv.* M . ANTONINVS AVG . TR . P . XXIII. Head to right, laureate.  
*Rev.* COS . III. Diana standing to left, holding arrow and bow. *Cohen*, III. 130.
208. *Obv.* M . ANTONINVS AVG . TR . P . XXVI. Head to right, laureate.  
*Rev.* IMP . VI . COS . III. Aequitas standing to left, holding scales and cornucopie. *Cohen*, III. 257.
209. *Obv.* M . ANTONINVS AVG . GERM . SARM. Head to right, laureate.  
*Rev.* PAX . AVG . — TR . P . XXXI . IMP . VIII . COS . III . P . P. Pax standing to left, bearing arms with torch, and holding cornucopie in left hand. *Cohen*, III. 440.
210. *Obv.* IMP . M . AVREL . ANTONINVS AVG. Head to right, laureate.  
*Rev.* PROV . DEOR . TR . P . XV . COS . III. Providentia standing to left, holding globe and cornucopie. *Cohen*, III. 508.
211. Similar: bust to right draped, head bare. *Cohen*, III. 511
212. *Obv.* Similar: head bare to right.  
*Rev.* Similar: but legend ending TR . P . XVI . COS . III. *Cohen*, III. 519.

213. *Obv.* Same as No. 209.

*Rev.* SECVRIT . PVB . TR . P . XXX . IMP . VIII . COS . III. Securitas seated to left, her right hand raised above her head. *Cohen*, III. 588.

214. *Obv.* AVRELIVS CAES . ANTON . AVG . PII . P. Head to right, bare.

*Rev.* TR . POT . X . COS . II. Aequitas standing to left, holding scales and sceptre. *Cohen*, III. 701.

215. Similar: but type of reverse, Soldier standing to left, holding parazonium and spear. *Cohen*, III. 703.

216. Similar: but reverse legend TR . P . XI . COS . II. *Cohen*, III. 721.

217. *Obv.* M . ANTONINVS AVG . ARM . PARTH . MAX. Head to right, laureate.

*Rev.* TR . P . XXI . IMP . III . COS . III. Providentia standing to left, holding staff and sceptre; at her feet, globe. *Cohen*, III. 881.

218. *Obv.* Same.

*Rev.* TR . P . XXI . IMP . III . COS . III. Aequitas standing to left, holding scales and cornucopiae. *Cohen*, III. 882.

219. *Obv.* M . ANTONINVS AVG . GERM . SARM. Head to right, laureate.

*Rev.* TR . P . XXIX . IMP . VIII . COS . III. Felicitas standing to left, holding caduceus and cornucopiae. *Cohen*, III. 920.

220. *Obv.* Same.

*Rev.* TR . P . XXX . IMP . VIII . COS . III. Roma standing to left, holding Victory and spear. *Cohen*, III. 935.

FAUSTINA JUNIOR, WIFE OF MARCUS AURELIUS.

221. *Obv.* FAUSTINA AVGVSTA. Bust of Faustina to right, draped.

*Rev.* AVGVSTI PII FIL. Concordia standing to left, holding patera and cornucopiae. *Cohen*, III. 21.

222. Similar: but type of reverse, Female figure standing, right hand raised and holding her dress with left. *Cohen*, III. 31.

223. *Obv.* Same.

*Rev.* DIANA LVCIF. Diana standing to left, holding torch with both hands. *Cohen*, III. 84.

224. *Obv.* Similar.

*Rev.* FECVND . AVGVSTAE. Fecunditas standing towards left, between two children; two others in her arms. *Cohen*, III. 95.

225. *Obv.* Same as No. 221.

*Rev.* HILARITAS. Hilaritas standing to left, holding palm and cornucopiae. *Cohen*, III. 110.

226. *Obv.* Same as on No. 221.

*Rev.* LAETITIA. Laetitia standing to right, holding sceptre and wreath. *Cohen*, III. 147.

227—228. *Obv.* Similar: bust diademed.

*Rev.* SAECVLI FELICIT. Commodus and the young Antoninus seated on throne. *Cohen*, III. 191.

229. *Obv.* Same as No. 221.

*Rev.* SALVS. Salus standing to left, holding sceptre and feeding serpent which rises from altar. *Cohen*, III. 197.

230. *Obv.* FAVSTINAE AVG. PII AVG. FIL. Bust to right, draped, hair wavy and bound with pearls.

*Rev.* VENVS. Venus standing to left, holding apple and rudder. *Cohen*, III. 266.

MARCUS AURELIUS AND LUCIUS VERUS.

231. *Obv.* ANTONINVS ET VERVS AVG. REST. Three standards; between which LEG. VI.

*Rev.* ANTONINVS AVGVSTVS. Galley to left; beneath HIRV. R. P. C.

LUCIUS VERUS, A.D. 161—169.

232. *Obv.* DIVVS VERVS. Head of Verus to right, bare.

*Rev.* CONSECRATIO. Eagle. *Cohen*, III. 55.

233. *Obv.* L. VERVS AVG. ARMENIACVS. Head of Verus to right, laureate.

*Rev.* TR. P. V. IMP. II. COS. II. Mars walking to left, carrying Victory and trophy.

*Cf. Cohen*, III. 265.

This coin is only published in gold. There is a specimen in silver in the National Collection.

234. *Obv.* L. VERVS AVG. ARM. PARTH. MAX. Head to right, laureate.

*Rev.* TR. P. VII. IMP. III. COS. III. Aequitas standing to left, holding scales and cornucopiae. *Cohen*, III. 297.

LUCILLA, WIFE OF LUCIUS VERUS.

235. *Obv.* LVCILLAE AVG. ANTONINI AVG. F. Bust of Lucilla to right, draped.

*Rev.* CONCORDIA. Concordia seated to left, holding patera; left arm on figure of Spes. *Cohen*, III. 6.

236—237. *Obv.* LVCILLA AVGVSTA. Bust to right, draped.

*Rev.* VENVS VICTRIX. Venus standing to left, holding Victory and shield. *Cohen*, III. 89.

COMMODUS, A.D. 180—192.

238. *Obv.* M. COMM. ANT. P. FEL. AVG. BRIT. P. P. Head of Commodus to right, laureate.

*Rev.* APOL. PAL. P. M. TR. P. XVI. COS. VI. Apollo standing towards right; plectrum in right hand, and with left placing lyre on altar. *Cohen*, III. 24.

239. *Obv.* M. COMM. ANT. P. FEL. AVG. BRIT. Head to right, laureate.

*Rev.* AVCT. PIET. P. M. TR. P. XII. IMP. VIII. COS. V. P. P. Pietas standing to left, sacrificing at altar; box in left hand. *Cohen*, III. 34.

240. *Obv.* Same as No. 238.

*Rev.* FIDEI. COM. [P. M. TR.] P. XVI. COS. VI. Fides standing to left, holding ears of corn and sceptre. *Cohen*, III. 127.



488 *Excavations on the site of the Roman city at Silchester, Hants, in 1894.*

241. *Obv.* Same as No. 239.

*Rev.* HILAR . AVG . P . M . TR . P . XII . IMP . VIII . COS . V . P . P. Hilaritas standing to left, holding branch and palm. *Cohen*, III. 212.

242. *Obv.* Same as No. 239.

*Rev.* LIBERALITAS AVG . VII. Liberalitas standing to left, holding tessera and cornucopie. *Cohen*, III. 323.

243. *Obv.* L . AEL . AVREL . COMM . AVG . P . FEL. Head to right, laureate.

*Rev.* LIB . AVG . VIII . P . M . TR . P . XVII . COS . VII . P . P. Liberalitas standing to left, holding tessera and cornucopie. *Cohen*, III. 325.

244. *Obv.* Same as No. 238.

*Rev.* MIN . AVG . P . M . TR . P . XVI . COS . VI. Minerva running to right, looking back, holding branch in right hand and shield and spear in left. *Cohen*, III. 350.

245. *Obv.* Same as No. 239.

*Rev.* P . M . TR . P . XIII . IMP . VIII . COS . V . P . P. Genius standing to left, holding patera and ears of corn. *Cohen*, III. 531.

246—247. *Obv.* M . COMMODVS ANTONINVS . AVG. Head to right, laureate.

*Rev.* TR . P . VII . IMP . III . COS . III . P . P. Providentia standing to left, holding staff and sceptre; at her feet globe. *Cohen*, III. 830.

248. *Obv.* L . AVREL . COMMODVS AVG. Head to right, laureate.

*Rev.* TR . P . XXXI . IMP . VIII . COS . III . P . P. Emperor seated to left, holding branch and sceptre. *Unpublished*.

249. *Obv.* Same as No. 239.

*Rev.* VIRTVT . AVG . P . M . TR . P . XII . IMP . VIII . COS . V . P . P. Virtus standing to left, holding Victory, spear, and shield. *Cohen*, III. 966.

250. *Obv.* Same as No. 239.

*Rev.* VOT . SOL . DEC . P . M . TR . P . XII . IMP . VIII . COS . V . P . P. Emperor standing to left, sacrificing at altar. *Cohen*, III. 1001.

CRISPINA, WIFE OF COMMODUS.

251. *Obv.* CRISPINA AVGVSTA. Bust of Crispina to right, draped.

*Rev.* HILARITAS. Hilaritas standing to left, holding palm and cornucopie. *Cohen*, III. 18.

CLODIUS ALBINUS A.D. 193—197.

252. *Obv.* D . CLOD . SEPT . ALBIN . CAES. Head of Albinus to right, bare.

*Rev.* MINER . PACIF . COS . II. Minerva standing to left, holding branch in right hand and sceptre and shield in left. *Cohen*, III. 48.

SEPTIMIUS SEVERUS, A.D. 193—211.

253. *Obv.* IMP . CAE . L . SEP . SEV . PERT . AVG. Head of Severus to right, laureate.

*Rev.* VIC . AVG . TR . P . COS. Victory to right, holding wreath and palm. *Cohen*, IV. 682.

## APPENDIX II.

*Note on hoards of Roman Silver Coins found in Britain, with special reference to the Silchester Hoard.* By F. HAVERFIELD, Esq., M.A., F.S.A.

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Read March 28, 1895.

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The coinage of the later Roman Republic was, in the main, a silver coinage of denarii issued either (1) at Rome by the officials of the mint, or (2) in the provinces by various generals, of whom for our present purpose the most noteworthy is Mark Antony. The older numismatic writers described the whole of this coinage as "consular," and the issues of the Roman mint as "family" coins, and the appellations, though inaccurate, have remained in use like "Samian ware," and other convenient phrases. The silver of the coinage is on the whole very pure, the alloy rarely exceeding three per cent., but the issues of Antony form an exception, containing fifteen per cent. of alloy. A considerable number of the denarii of this period, both Antony's and others, are plated, but this is a feature which is common to all periods of Roman coinage. So far as we can make out, a proportion of plated silver was regularly issued from the Roman mint, to ease the treasury and to serve somewhat the purpose of our modern paper-money.

Examples of this Republican coinage have been frequently found in Britain, as elsewhere in Europe, both in hoards and sporadically, and, as elsewhere, the finds fall into two distinct groups. The division between these groups coincides partly with the division between the issues of the Roman mint and those of Antony, but is determined actually by questions of date.

(A) The first group of finds comprises "contemporary deposits," coins lost or buried near to the time when they were issued. This means for Britain the coins imported previous to the Claudian conquest. It is well known that the Republican silver circulated outside the Roman dominions, and Tacitus, in a well-known passage, observes that it was gladly accepted in Germany a century after the Empire had been founded, the cause being the purity of the silver. It had currency also in Britain, where it supplemented the native silver coinage, and many examples have been found. As we should expect, these occur mostly in the southern counties, which were most open to Roman influences, and the are all, or nearly all, "family coins." As instances I may refer to the hoards of Ayott St. Lawrence in Hertfordshire, of Frome in Somersetshire, of Almondbury and of Lightcliffe, near Halifax, all of which were buried before or during the Claudian invasion. Here too I would place the "family" coins found at Boxmoor (Herts), where Briton and Roman successively inhabited the same spot. Here also I would, at least conjecturally, class the instances of family coins found sporadically in southern England at places which were not specially Roman sites, Newtown in the Isle of Wight, Waltham in

Hampshire, Prinstead in Sussex, Weston in Norfolk, Reigate in Surrey, and others. Here we are dealing with contemporary deposits, and we ought perhaps, historically, to classify these coins in Britain as pre-Roman. A somewhat different instance of a contemporary deposit was found in Swithin's Lane, London; it consisted of several hundred denarii, "family" coins, issues of Antony and of the Emperors till Claudius, and all plated. These coins belong to the "paper-money" class mentioned above, and may perhaps have been intended for the army of invasion in or soon after A.D. 43. This is the only instance known to me in which plated denarii have occurred in a hoard.

(B) The second group of finds differs from the first in two respects: (1) the deposits are not contemporary but survivals, the coins having been lost or buried two centuries after minting, and (2) they are usually legionary issues of Antony. They appear both in hoards and sporadically. The hoards are well illustrated by the Silchester example; they contain (1) a few republican coins, and (2) a fairly complete series from Nero or Vespasian till a point which varies between (roughly) A.D. 175 and 250. The sporadic finds occur on Roman sites, often in the north, at Ellenborough, *Aesica*, Chesters, York, Lancaster. Here we are plainly dealing with survivals; the explanation of their occurrence is in the main easy and certain.

The silver coinage of the early Empire, like that of the Republic, is generally good; debasement began with Nero, who reduced the weight and increased the alloy of the denarius. The debasement continued into the third century, and it has been calculated that, if a denarius of Augustus was worth ninepence, Nero's was worth eightpence, Hadrian's sixpence, and that of Severus under fourpence. As the debasement went on, the older and better coins were melted down, and Trajan actually "converted" a large part of the pre-Neronian issues, by calling them in and reissuing them with the alloy and weight of his own denarius. The Treasury, of course, gained the surplus silver. In the result pre-Neronian silver vanished, with two exceptions: (1) The heavily alloyed denarii of Antony were spared for a while, since they were not worth "converting"; it was not till Hadrian that the imperial denarius sunk below their level. (2) Many republican coins survived in Germany and elsewhere outside the Empire; the inhabitants of these lands preferred good coin, which they could easily distinguish from the debased imperial denarii of (say) Hadrian or Severus. Hence we can explain the characteristics of the hoards of denarii which were buried in the second half of the second century or the first half of the third century. These hoards are very numerous, both in Britain and on the continent, and those which, like the Silchester example, contain republican coins form only a variety in a large class. The feature of this class is the omission of early imperial silver and the commencement of a continuous series with Nero or Vespasian, and this feature harmonises exactly with the sketch of the silver currency which I have given. The coins of the Republic found a place in such hoards because they were either good silver: even if minted by Antony, they were now relatively valuable. They had a further value in that their types distinguished them absolutely from imperial issues, and we have a curious proof that this was recognised. A hoard was discovered in 1853 at the village of Tibod, in the Roman province of Dacia, which contained nearly 200 republican coins, many of them Antonian issues, and over 600 imperial denarii from Vespasian to A.D. 167. The coins were in two urns, and were so arranged that the republican were in one urn, the imperial

in the other. It is a fair inference that the owner of these coins drew a marked distinction between the republican issues of all sorts and the post-Neronian issues of the Empire.\* A similar feeling prevailed in other parts of the Empire, and we see that towards the end of the second century the legionary issues of Antony, which had escaped melting down through their badness, now found their way into hoards through their relative goodness.

It remains to say a word as to the date when the Silchester hoard was buried. The hoards of denarii found in Britain, which commence a continuous series with Nero or Vespasian, end either just before A.D. 170, or in the reign of Severus, or in the middle of the third century, when silver coining ceased. The larger number end just before or after A.D. 170, that is to say, they include M. Aurelius, Verus, and Lucilla; and it is possible that they were buried when troubles broke out in Britain about A.D. 184-6. At the same time, it must be remembered, as Mommsen has observed, that hoards of silver seem to include rather the oldest (that is, the best) than the newest coins in the burier's possession, and some of the hoards that end with Aurelius may conceivably have been buried in the struggle between Albinus and Severus (A.D. 194-197), which closely concerned Britain. The Silchester hoard ends with a coin dated A.D. 193, and as that coin is said to be nearly unused, the hoard may well have been buried during the struggle just mentioned.

I append three lists of (1) hoards of denarii found in Britain, which commence about Nero's reign but include issues of the Republic, (2) hoards of the same character which do not include republican issues, and (3) sporadic instances of republican denarii. All three lists have reference only to Britain, and even in that limited area are intended to be illustrative, not exhaustive.

\* Gooss, *Chronik der Archäologischen Funde Siebenbürgens* (Hermannstadt, 1876), p. 113; Mommsen and Blacas, *Histoire de la Monnaie Romaine*, iii. 51.

A.—HOARDS OF DENarii COMMENCING WITH NERO, BUT INCLUDING  
REPUBLICAN COINS.

1. Beachamwell (Norfolk), in 1847, perhaps 50, certainly 37, pieces: A "consular medal of the Antonia family," and Vespasian to Commodus (*Norfolk Chronicle*, quoted in *Numismatic Chronicle*, x. (1843) 102; Mommsen, *Histoire de la Monnaie Romaine, traduite de l'allemand, par le Duc de Blacas*, iii. 54).
2. Castor, near Walton (Norfolk), in 1820, about 300 pieces, some of Antony and Vespasian to M. Aurelius. This hoard also contained bronze pieces (*Archaeologia*, xx. 578).
3. Linton (Cambridgeshire), in 1840, about 200 pieces: "Hadrian, Severus, Nerva Macrinus [? Trajanus], and a few legionary" (*Numismatic Chronicle*, xvi. (1854) 22).
4. March (Cambridgeshire), in 1730, a large hoard; 100 examined included a legionary coin of Antony and Vespasian to Pius. (Gale's Papers in Nichols's *Bibliotheca Topographica Britannica*, iii. 163.)
5. Leigh Down, near Bristol, in 1817, 500 or 1,000 pieces. A list of 240 is given by Seyer (*Memoirs Historical and Topographical of Bristol, &c.*, i. 164-7). The imperial coins range from Nero to Salonina; a fourth-century coin is mentioned also, perhaps by error. Ten republican coins are noted, one of the gens Appuleia (*Babelon*, i. 208), one of the Cordia (*Ib.*, i. 383, No. 1), four seem to be Antony's, and four are obliterated.
6. Wroxeter, 402 pieces, including one of gens Porcia and some of Severus (Wright, *Uriconium*, 332-408).
7. Cilhaul, near Trefeglwys (Montgomeryshire), about 1835, over 200 pieces secured by the tenant of the farm, who gave all but 10 gradually away; the 10 included Antony and Vespasian to Aurelius (*Montgomeryshire Collections*, iii. (1870) 417; xii. 23).
8. Near Harlech, in 1848, Republic (gens Naevia) and Empire?
9. Bentley Ings, near Doncaster, about 1865, legionary coins of Antony, some Augustus (?), and Nero to M. Aurelius (*Numismatic Chronicle*, v. (1865) 371; Mommsen-Blacas, iii. 53).
10. Lombard's Green (Derbyshire), about 1768, 80 pieces: Coins of "the Triumvirate" and Nero to M. Aurelius (Watkin, in *Journal of the Derbyshire Archaeological Society*, viii. 204).
11. Near Sheffield, in 1861, about 100 pieces: Coins of Antony and Nero to M. Aurelius (*Archaeological Journal*, xviii. (1861) 71.)
12. Near Cliviger (Lancs.), in 1695, "Consular"—gens Cassia and Valeria—and imperial (Watkin, *Roman Lancashire*, 232; compare *Archaeologia*, vii. 414).
13. Thorngraston, Barcombe Hill, near Housesteads, in 1837, 3 gold and 60 silver pieces: The silver included 9 family coins (Aquillia, Coelia, Cordia, Furia (?), Livineia, Iulia (*Babelon*, ii., No. 10), Marcia, Plautia (*Ib.*, ii., No. 13), and Nero to Hadrian (Bruce, *The Roman Wall* (3rd ed.), 419-423).

B.—HOARDS OF DENarii COMMENCING ABOUT NERO, NOT INCLUDING  
REPUBLICAN COINS.

London (Jewin Street)	68. Galba to Faustina the Elder	<i>Journal of the British Archaeological Association</i> , ii. 172; <i>Numismatic Chronicle</i> , 1st Series, ix. 85.
Colchester	32. Hadrian to Severus Alexander	<i>Numismatic Chronicle</i> , 3rd Series, x. (1890) 262.
Benacre (Suffolk)	920. Nero to Aurelius	<i>Gentleman's Magazine</i> , 1786, i. 472; ii. 538, 581; Alfred Suckling, <i>History and Antiquities of Suffolk</i> , ii. 127.
Hinxworth (Herts.), Cashio	500. Nero to Aurelius	J. E. Cussans, <i>History of Hertfordshire</i> , iii. (2) 316.
Horseheath (Cambs.)	Many. Nero to Verus	C. C. Babington, <i>Ancient Cambridgeshire</i> , 35.
Knapwell	„ Vespasian to Verus	<i>Numismatic Chronicle</i> , 1st Series, i. (1841) 64.
Stoneham	„ Vespasian to Severus (? Verus)	<i>Ibid.</i> , vii. 193; <i>Gentleman's Magazine</i> (1844), 526.
Feltwell (Norfolk)	300. Early middle period	<i>Journal of the British Archaeological Association</i> , xxxvi. 103.
Melton	? Titus to Aurelius	G. E. Fox, in <i>Archaeological Journal</i> , xlv. 362.
Mansfield (Notts.)	300—400. Vespasian—Geta	<i>Journal of the British Archaeological Association</i> , v. 160.
Naseby	38. Vespasian to Aurelius	<i>Archaeological Journal</i> , xxxii. 112.
Alfreton (Derbyshire)	500 or 1,500. Vespasian to Severus, perhaps to Gordian	<i>Journal of the Derbyshire Archaeological Society</i> , viii. 196, 219.
Boverton (S. Wales)	40. Vespasian to Faustina	
Bryn Gwydiaw (N. Wales)	46. Vespasian to Pius (one Claudius).	
Eccleston (Chester)	43. Vespasian to A.D. 168	<i>Journal of the Chester Archaeological and Historic Society</i> , N.S., i. 91.
Standish (Lancs.)	200. Domitian to Gordian	W. T. Watkin, <i>Roman Lancashire</i> , 239.
Fleetwood	400. Vespasian to Caracalla	<i>Ibid.</i> , 238.
Torbock	33. Vespasian to Aurelius (or Gordian)	<i>Ibid.</i> , 237.
Kinross (N.B.)	600. Nero to Severus	C. R. Smith, <i>Retrospections, Social and Archaeological</i> , ii. 180.



## C.—SPORADIC FINDS OF REPUBLICAN COINS.

Richborough . . . . .	{ Antony (plated) . Plautoria . . . Consular (lead) .	{ C. R. Smith, <i>The Antiquities of Richborough, Reculver, and Lymne</i> , 122.
Reculver . . . . .	Antony . . . . .	Hasted, <i>History of Kent</i> , iii. 634, note; Smith, 212.
Springhead . . . . .	? . . . .	<i>Journal of the British Archaeological Association</i> , i. 155.
Upchurch . . . . .	? . . . .	<i>Ibid.</i> xxi. 231.
Prinstead (Sussex) . . . . .	Cornelia . . . . .	<i>Archaeological Journal</i> , xiii. 96.
Newtown (Isle of Wight) . . . . .	Rubria . . . . .	<i>Journal of the British Archaeological Association</i> , vi. 439.
Waltham (Hants) . . . . .	Scribonia . . . . .	<i>Archaeological Journal</i> , vi. 193.
Reigate . . . . .	Carisia . . . . .	<i>Ibid.</i> xiii. 276.
London . . . . .	Various . . . . .	C. R. Smith, <i>Illustrations of Roman London</i> , 154.
Boxmoor . . . . .	Family . . . . .	<i>Archaeologia</i> , xxxiv. 397; xxxv. 66.
Northwold (Hants) . . . . .	Lucretia . . . . .	<i>Archaeological Journal</i> , xiii. 296 (in a Saxon ornament).
Weston (Norfolk) . . . . .	{ Cassia . . . . . Antonia . . . . . Claudia . . . . .	{ <i>Norfolk Archaeology</i> , iv. 357 (with British coins). Evans, <i>Ancient British Coins</i> , 361.
Stubbington (Hunts) . . . . .	? . . . .	<i>Journal of the British Archaeological Association</i> , ii. 192.
Leicester . . . . .	? . . . .	<i>Gentleman's Magazine</i> , 1797, i. 203.
Wroxeter . . . . .	{ Porcia . . . . . Antony . . . . .	{ Thomas Wright, <i>Uriconium</i> , 407.
Chester . . . . .	Antony . . . . .	W. T. Watkin, <i>Roman Cheshire</i> , 227, 237.
Northwich . . . . .	Sicinia . . . . .	<i>Ibid.</i> 257.
Wilderspool . . . . .	Antony and Acilia . . . . .	<i>Ibid.</i> 271.
Lancaster . . . . .	{ Antony . . . . . Postumia . . . . .	{ W. T. Watkin, <i>Roman Lancashire</i> , 189.
York . . . . .	Antony . . . . .	<i>Gentleman's Magazine</i> , 1767, 49; 1770, 155.
Maryport (Cumb.) . . . . .	Antony . . . . .	J. C. Bruce, <i>Roman Wall</i> , 3rd ed. 370. Another specimen found lately.
Greatchesters ( <i>Aesica</i> ) . . . . .	Antony . . . . .	Found July, 1894.
Chesters (Cilurnum) . . . . .	Cassia . . . . .	<i>Archaeological Journal</i> , xix. (1862) 363.
South Shields . . . . .	Family, Antony . . . . .	<i>Archaeologia Aeliana</i> , x. (1885) 275.





LATE-CELTIC BRONZE COLLAR FOUND AT WRAXALL, SOMERSET (full size).

## APPENDIX.

### 1. *On a Late-Celtic Bronze Collar from Wraxall, Somerset.*

December 13th, 1894.—W. R. Barker, Esq., through A. E. Hudd, Esq., F.S.A., exhibited a Late-Celtic collar of bronze, found at Wraxall, Somerset, on which Sir A. Wollaston Franks, President, read the following notes :

“ I have long known the collar found at Wraxall, through the medium of a plaster cast, not a very good one, which is in the British Museum. Another cast, now in the Society's collection, was exhibited in 1842 by the Reverend H. T. Ellacombe, and is noticed in the Appendix to *Archaeologia*,<sup>a</sup> where it is stated that Mr. Conthupe, who made the cast, analysed the metal of the original, with the following result : ‘ Copper predominates in it, the other metal being either lead, antimony, or zinc.’ Properly speaking, therefore, the material is not bronze, but brass, there being no tin.

It has been described as a torques, or tore, which seems scarcely correct, as it is not formed of a twist, like true torques. It belongs to the period which I have termed Late Celtic, and I have included it in the list of personal ornaments of that period in Kemble's *Horæ Ferales*,<sup>b</sup> where I have noticed twenty-two collars, English and foreign.

Of all the English specimens in bronze, the one from Wraxall (Plate XLVIII.) is the most ornamental. It has been suggested that the cavities in its upper surface were once filled with precious stones. This is, however, improbable, as far as true precious stones are concerned, as the Celts do not seem to have been acquainted with them. There, may, however, have been pieces of red coral, or glass imitating it, amber, or even possibly British pearls.

Like most of these collars, the mode of fastening seems to have been peculiar, and it is to be regretted that it has been so injudiciously tampered with. The following are the other English examples with which I am acquainted in this metal :

1. A bronze collar found in 1831 at Mowrood, in the parish of Rochdale, and in the collection of the late Mr. Dearden. It was exhibited to the Society in 1832.<sup>c</sup> A lithograph of it was prepared by Mr. Dearden, and a small engraving appeared in the *Gentleman's Magazine* for 1843. The collar consists of two portions, one comparatively flat, the other formed of eleven wreathed beads. The two parts were united by iron tenons.

2. A collar, of somewhat the same design as the last, but more slender, was found on the edge of the moor behind Emsay, near Skipton, West Riding, Yorkshire. It was exhibited to the Society in November, 1845, and is engraved in *Archaeologia*.<sup>d</sup> One portion consists of a

<sup>a</sup> Vol. xxx. p. 521.

<sup>b</sup> Page 181.

<sup>c</sup> *Archaeologia*, xxv. 595.

<sup>d</sup> Vol. xxxi. Pl. xviii. p. 517.

quadrangular bar, the other has twelve bead-like projections, and the two parts were united by tenons, which were kept in their place by the elasticity of the material.

3. A collar, not unlike No. 1, found in Lochar Moss, Dumfriesshire, and now in the British Museum. It was exhibited to the Society April 10th, 1851, and engraved in *Archaeologia*,<sup>a</sup> with a paper by Mr. Albert Way. Here the collar has been in two portions, a flat band with a raised edge, on which is a Late-Celtic design, and fourteen ribbed beads, with intervening sockets, now all loose. In each of these is a square hole, through which may have passed a quadrangular iron bar, now decayed, which probably terminated in a tang to fasten the collar.

4. Fragment of a bronze collar found at Penderwell, in the parish of Claines, near Worcester, and formerly in the collection of Mr. Allies, who has published it in his *Folklore of Worcestershire*. It was exhibited to the Society 14th December, 1843, and engraved in *Archaeologia*.<sup>b</sup> It consists of the ornamental portion of the collar with twenty beads like vertebræ strung on to an iron wire or bar. This seems to confirm my suggestion as to an iron bar in the last specimen.

5. A collar of somewhat different type to those described was found in 1747 at Sticheh, co. Roxburgh, Scotland, and is preserved in the Museum of Scottish Antiquities at Edinburgh. It is engraved as a head-ring in Wilson's *Prehistoric Annals* (1863),<sup>c</sup> and in the Catalogue of the Museum formed by the Archaeological Institute at Edinburgh in 1856.<sup>d</sup> It is perhaps of somewhat later date. The front portion is at right angles to the back, and both parts are ornamented with a scroll pattern.

6. A collar, again somewhat different, was discovered in the Isle of Portland, it is said in a sarcophagus with Roman pottery. It was presented to the British Museum by Mr. Luff in 1889, and of this I exhibit a drawing.<sup>e</sup>

It will be seen that this collar is unusually flat, the principal prominences being the two knots in front. It has scrolls in relief and holes into which coral or glass pastes may have been fixed. It fastens by means of a hinge behind and a kind of catch in front, like the collar from Sticheh.

7. The specimen most like the collar from Wraxall consists of three fragments found in 1802 in a stream-work called Trenoweth in Cornwall, exhibited to the Society in 1807, and engraved in *Archaeologia*.<sup>f</sup> It is a good deal ornamented with engraved and punched work uniformly disposed round the circle.

I doubt if the collar or torques found at Polden Hill should be included, though of the same period. It is a plain iron collar round which is twisted bronze wire. It is engraved in *Archaeologia*.<sup>g</sup>

It is singular that no collar of this kind seems to have been found in Ireland.

In France collars of this period are not unfrequent, especially in the eastern districts, as well as in Switzerland. I have given an account of some of them in Kemble's *Horæ Ferales* as above stated, but they do not resemble very closely the British specimens."

<sup>a</sup> Vol. xxxiv. Pl. xi. p. 86.

<sup>b</sup> Vol. xxx. p. 554.

<sup>c</sup> Vol. ii. p. 146.

<sup>d</sup> Page 25.

<sup>e</sup> Vol. xvi. Pl. x. p. 127.

<sup>f</sup> Vol. xiv. Pl. xix. fig. 6.

<sup>g</sup> Vol. xiv. Pl. xix. fig. 6.

## 2. On a Late-Celtic Dagger Sheath found in Oxfordshire.

January 24th, 1895.—Percy Manning, Esq., exhibited a Late-Celtic Dagger Sheath of bronze found in a backwater of the Thames close to North Hinksey, near Oxford, on which C. H. Read, Esq., Secretary, made the following communication :

“The dagger sheath exhibited by Mr. Manning is a characteristic example of Late-Celtic art, though some of the details are of an unusual design. In its present state it is 12·8 inches in length, and is formed of two plates of bronze, with the addition of a chape and a loop near the mouth for suspension. One plate forms the front of the sheath; this is bent at the edges so as to lap over the other plate forming the back, and to this it is neatly braised. The sheath still contains the iron blade of the dagger, which has rusted in place. The front of the sheath (Fig. 1) is ornamented with two pairs of ribs following the outline of the edge, and the spaces within are filled with minute punched ornament of a formal character, very different from the flowing curves usually associated with the art of the Celts. This design is well seen in the engraving and need not be described in detail. The plate forming the back (Fig. 2) is also ornamented, but in a less elaborate style. A wavy line formed by punching three rows of small crescents occupies about one-third of the total length of the sheath, and it is interesting to note that this has been first set out on the metal by striking a number of semicircles with compasses; the centre points are plainly to be seen. The upper part of the back plate is furnished with a plain flat loop or slide, through which no doubt a strap for suspension was passed, and above and below this is an embossed band with three circles containing bosses. The mouth of the sheath is of the elegant curved form usually found in Late-Celtic sheaths both abroad and in England.

The chape is, however, the most interesting feature of this specimen. The form, as the figures show, is by no means a highly ornate one, and by itself it possesses but slight importance. In the British Museum, however, are three similar sheaths<sup>a</sup> of the same general character, but differing in details



Fig. 1.  
Late-Celtic Dagger  
Sheath found in  
Oxfordshire.  
(Front view.)

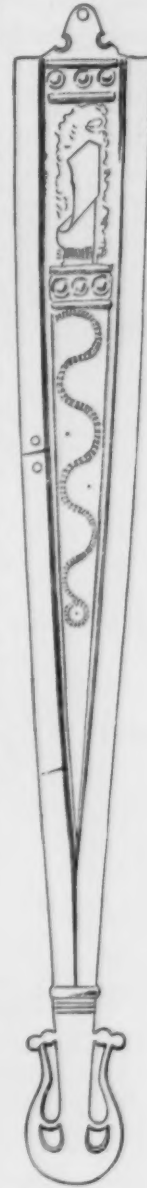


Fig. 2.  
Late-Celtic Dagger  
Sheath found in  
Oxfordshire.  
(Back view.)

<sup>a</sup> One of these is figured in Kemble's *Horæ Fœdæ*, plate xvii. fig. 3, and in the *Archæological Journal*, x. 259. It will be clearly seen that the same elements are to be found in the chapes of both sheaths.



both from each other and from that now before us. A comparison of the chapes at once shows the importance of a series of such antiquities, for in the present case it becomes immediately clear that in these four specimens we have a signal example of the evolution of form, and, as it seems to me, that there is an intimate connection between the ordinary chape of the now well-known Late-Celtic sword (such as may be seen in *Archaeologia*, vol. lii. p. 35) and the equally familiar pelta-shaped chape of the Roman soldier's sword. In this way the object before us is a document of some value, and it is to be hoped that it may find a resting place where it will be of the greatest use."

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